Performing on-report analysis with Web Intelligence

BusinessObjects Enterprise XI 3.0

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About Web Intelligence

chapter 1

How Web Intelligence performs business intelligence over the web

Web Intelligence provides business users an easy to use interactive and flexible user interface for building and analyzing reports on corporate data over the web, on secured intranets and extranets. The Web Intelligence software is installed by your administrator on a web server on your corporate network.

To use Web Intelligence from your local computer, you log into the business intelligence portal InfoView via your Internet browser. Then, depending on your security profile, you can interact with the reports in corporate documents or edit or build your own documents using a Web Intelligence report panel or query panel.

How Web Intelligence performs business intelligence offline

Web Intelligence can be used offline as Web Intelligence Rich Client, a standalone Microsoft Windows application, equivalent to the Java Report Panel, that you can install on your computer. Web Intelligence Rich Client lets you continue to work with Web Intelligence (WID) documents when you are unable to connect to a CMS, when you want to perform calculations locally rather than on the server, and when you want to work with Web Intelligence documents without installing a CMS or application server.

Web Intelligence Rich Client can also be used when connected to a CMS.

Interacting with Web Intelligence reports

Depending on your security profile and on how Web Intelligence is deployed across your organization, you can view, analyze, or enhance and modify the data displayed on reports.

Viewing and printing Web Intelligence reports

Once logged into the business intelligence portal InfoView, you can access Web Intelligence documents and view reports. Onscreen navigation is made easy with page-to-page navigation buttons and a document map that allows you to jump from section to section or report to report.

The same document can provide the information adapted to each user due to prompts that request each user, who opens the document, to specify the data they want to return to the reports.

When you print reports, Web Intelligence automatically generates a copy of reports in Portable Document Format (PDF) format for optimum print quality.

Drilling on Web Intelligence reports

Drilling on Web Intelligence reports enables you to analyze the detailed data behind the displayed results. You can turn the report you are viewing into a drillable report or drill on a duplicate of the original report to retain a version of the results before your drill analysis.

Once you have found the information you need, you can save a snapshot of the drilled report to share the results of your analysis with other Web Intelligence users, or save the document in Excel or Portable Document (PDF) format to print or email to other business contacts.

Performing on-report analysis

Viewing Web Intelligence reports in Interactive view format enables you to enhance reports and fine-tune the data reports contain, to highlight the information that most interests you on demand.

On-Report Analysis is designed for:

- users who need to build queries and then want to build reports
- report consumers who need to manipulate the reports created by others

With On-Report Analysis you can:

- view document metadata to understand the data behind reports and see how reports are structured and filtered
- filter and sort results
- add new tables and charts
- add formulas and create variables
- format and change the layout of charts and tables
- slice and dice results by adding other data to charts and tables

Note: On-report analysis of Web Intelligence reports in Interactive view format is only available if your administrator has deployed Web Intelligence in JSP mode.

Creating and editing Web Intelligence documents

You can create or edit Web Intelligence documents using several tools:

- *Web Intelligence Query - HTML* on page 16
- *Web Intelligence Java Report Panel* on page 17
- *Web Intelligence Rich Client* on page 17
- *Web Intelligence HTML Report Panel* on page 17

Web Intelligence Query - HTML

Designed for users requiring a pure HTML environment to build queries, Web Intelligence Query – HTML offers the ability to define the data content of documents on multiple data sources. You can use Query – HTML to create new documents from scratch or edit the queries in documents created using any of the other Web Intelligence tools.

Used together with On-Report Analysis, Query – HTML provides a complete solution for building queries and designing powerful reports in a pure HTML environment. Once you have run the queries to generate a standard report, you can leverage Web Intelligence On-Report Analysis features to format multiple reports, add formulas, and create variables.

Note: Web Intelligence Query – HTML and On-Report Analysis in Interactive view format are only available, if your administrator has deployed Web Intelligence in JSP mode.

Web Intelligence Java Report Panel

The Java Report Panel is designed for users who need more flexibility with designing report layout and defining formulas and variables. A graphical Formula Editor enables you to build formulas rapidly using drag-and-drop.

Note: The Web Intelligence Java Report Panel is available if your administrator has deployed Web Intelligence in ASP mode and if your administrator has deployed Web Intelligence in JSP mode.

Web Intelligence Rich Client

Web Intelligence Rich Client is a locally installed Microsoft Windows application that lets you work with Web Intelligence (WID) documents that are stored locally or in a CMS.

When working without a CMS connection you can work on your local machine with either CMS-secured or unsecured documents.

Web Intelligence Rich Client is based on the Web Intelligence Java Report Panel and provides equivalent document creation, editing, formatting, printing and saving capabilities.

There are a number of reasons for using Web Intelligence Rich Client to work with WID documents:

- You want to work with Web Intelligence documents but you are unable to connect to a CMS (while traveling, for example).
- You want to improve calculation performance: Web Intelligence Rich Client performs calculations locally, rather than on the server, and local calculations can perform better than server calculations.
- You want to work with Web Intelligence documents without installing a CMS or application server.

Web Intelligence HTML Report Panel

Designed for users who need to build basic reports, the HTML Report Panel provides query and report features in a simple wizard-like interface. Each

document is based on a single data source and can contain multiple reports, displaying different subsets of information.

In addition, the HTML Report Panel is 508 compliant and can be customized for specialized deployments.

Note: The Web Intelligence HTML Report Panel is only available if your administrator has deployed Web Intelligence in JSP mode.

Accessing Web Intelligence from InfoView

chapter 2

You access Web Intelligence reports and set global Web Intelligence options from InfoView, the corporate business intelligence portal.

To log in to InfoView

Before you can use InfoView and Web Intelligence you need the following information:

- a URL to the InfoView server
- the InfoView server name and port number
- your login and password
- your authentication, which controls the InfoView resources available to you

Contact your adminstrator for these details if you do not already know them.

Note: By default the InfoView server name and authentification method are not displayed on the InfoView logon page. You need to supply this information only if your administrator has made these options visible.

You access Web Intelligence by using your web browser to log into InfoView, the corporate business intelligence portal. Once you are in InfoView, you can analyze and enhance Web Intelligence reports.

1. Launch your web browser.
2. Point your browser to the InfoView bookmark or URL.

   The InfoView login page appears.
3. If the **System** box is blank, type the name of the InfoView server followed by a colon (:), and then type the port number.
4. In the **Username** box, type your user name.
5. In the **Password** box, type your password.
6. In the **Authentication** box, select the authentication provided to you by your administrator.
7. Click **Log On**.

   The InfoView home page appears.

To log out of InfoView

When you finish using InfoView or Web Intelligence you need to log out, instead of simply closing your web browser.

Logging out of InfoView ensures that any preferences you modified during your InfoView session are saved. It also lets your administrator track how many users are logged into the system at any given time and thus optimize InfoView and Web Intelligence performance.

- Click **Log Out**.

  The login page appears. You are logged out of InfoView

Web Intelligence InfoView options

Web Intelligence document creation and viewing options

You can set your Web Intelligence options to determine how you create, view and interact with documents using Web Intelligence.

You create documents using a query editor to build the query to retrieve the document data. After the query returns the data to the document, you can view and interact with the data.

Document creation option	Description
Advanced	You create documents using the Java Report Panel, a Java applet than launches in your Web browser. The Java Report Panel is a combined query building, report editing and data analysis environment. If you choose **Advanced** as your document creation option, you also use the Java Report Panel for working with the data returned by the query. The **View format** option is not taken into account. The Java Report Panel provides the richest feature set of all Web Intelligence query building, report editing and data analysis environments.
Interactive	You build queries using Query - HTML, an HTML-based query editor.
Desktop	You build queries, edit reports and analyze data using Web Intelligence Rich Client, a standalone version of the Java Report Panel that runs outside your web browser.
Web Accessibility	You create documents using the HTML Report Panel, a 508-compliant query-building and report-viewing environment.

You can use the following view formats to view and interact with existing Web Intelligence documents, or documents that you have just created using a query editor:

View format	Description
HTML	Use HTML format when you want to open reports, answer prompts, navigate reports, and/or perform drill analysis.
Interactive	Use Interactive format when you want to apply filters, sorts, calculations, modify formatting and data displayed on tables and charts, and/or perform drill analysis. Use Interactive format if you are using Query – HTML to define queries, and you want to format reports based on those queries and add formulas and variables. Interactive view format is only available if your administrator has deployed Web Intelligence in JSP mode.
PDF	Use PDF mode when you want to view static reports.

To select the Web Intelligence query editor

1. Click the **Preferences** button on the InfoView toolbar.
2. Click **Web Intelligence Preferences** to display the Web Intelligence options.
3. Select the query editor beneath **Select a default creation/editing tool**.
4. Click **OK**.

To select the Web Intelligence view format

You can select different view formats for Web Intelligence documents depending on how you want to interact with the information displayed on the reports. You select your Web Intelligence view options in InfoView. When

you modify your view options, the new settings are implemented the next time you open a Web Intelligence document.

1. Click the **Preferences** button on the InfoView toolbar.
2. Click **Web Intelligence Preferences** to display the Web Intelligence options.
3. In the **Select a view format** section, select the view format.

To select a default universe for new documents

1. Click **Preferences** on the Infoview toolbar.
2. Click**Web Intelligence Preferences** to display the Web Intelligence options.
3. Click **Browse** beneath **Select a default universe** and browse to the universe you want to select as the default.

To set Web Intelligence drill options

Drilling on reports lets you look deeper into data to discover the details behind a good or bad summary result displayed on a table, chart, or section. Before you begin a drill session, you can set your drill options in InfoView to specify how reports will change each time you drill.

1. Click **Preferences** on the Infoview toolbar.
2. Click **Web Intelligence Preferences** to display the Web Intelligence options.
3. Select the drill options under **Drill options** and **Start drill session**.

Hide drill toolbar option

When you drill on a value displayed on a report, the Drill toolbar appears and displays the value on which you drilled. The value displayed on the toolbar filters the results displayed on the drilled report.

For example, if you drill on year 2001, the results displayed on the drilled table are Q1, Q2, Q3, and Q4 for year 2001. This means that the quarterly values you drilled to are filtered by 2001.

Note: If the drilled report includes dimensions from multiple queries, a ToolTip appears when you rest your cursor on the value displayed on the filter. The ToolTip displays the name of the query and the dimension for the value.

The Drill toolbar allows you to select alternative values on the same level, in order to filter the results differently. For example, if you use the Drill toolbar illustrated above to select “2002,” the results displayed on the drilled table would be Q1, Q2, Q3, and Q4 for year 2002.

You can opt to hide the Drill toolbar when you start drill mode. The Drill toolbar is only useful if you want to select filters during your drill session.

Prompt when drill requires additional data option

When you drill the results displayed on a Web Intelligence report, you may want to drill to higher- or lower-level information that isn’t included in the scope of analysis for the document. When this is the case, Web Intelligence needs to run a new query to retrieve the additional data from the data source.

Since queries on large selections of data may take a long time to be completed, you can choose to be prompted with a message every time a new query is necessary. The prompt message asks you whether you want to run the additional query or not. In addition, the prompt lets you apply filters to the extra dimensions you include in the new query. This means you can restrict the size of the query to only the data necessary for your analysis.

You need permission from your administrator to drill out of the scope of analysis during a drill session.

Synchronize drill on report blocks option

When you select the **Sychronize drill on all report blocks** option, the display of all blocks changes to correspond with your drill actions. For example, if you drill down on a block from year to quarter, and your report also contains a chart showing data by year, the chart display also changes to display data by quarter.

If you do not select the option, only the drilled block changes in response to drill actions.

Start drill session option

The **Start drill session** option controls how Web Intelligence behaves when you start drill mode.

Start drill session on existing report option

When you select **Start drill session on existing report**, the current report becomes drillable when you start drill mode. When you end drill mode, the report displays the drilled values.

Start drill session on a duplicate report option

When you select **Start drill on a duplicate report**, Web Intelligence creates a duplicate of the current report when you start drill mode, and you drill on the duplicate. This allows you to compare the results of the original report with the results you discover during your drill analysis.

Web Intelligence locale options

The locale determines how a Web Intelligence document displays data. It affects, for example, the formatting of numbers and the default sort order.

Three locale settings combine to determine how Web Intelligence displays data:

Locale	Description
Product locale	The locale in which InfoView displays data by default.
Document locale	The locale associated with a particular Web Intelligence document. When you save a document, the document locale becomes the current product locale or the preferred viewing locale. You can permanently associate a locale with a document. For more information, see *To permanently associate a locale with a document* on page 28.

Locale	Description
Preferred viewing locale	The locale in which you choose to view documents

The product locale

The product locale is the locale that InfoView uses by default. You set the product locale in the Infoview General preferences.

To set the product locale

1. Click **Preferences** on the main InfoView toolbar.
2. Click **General** to display the general options.
3. Select the product locale from the **Product locale** list.

The document locale

The document locale is the locale associated with a particular document. By default, the document takes the product locale when you save a document, or the preferred viewing locale if this is different from the product locale and your settings give the preferred viewing locale priority. The document retains this locale until the next time it is saved, when it again takes either the product locale or the preferred viewing locale.

You can permanently associate the current document locale with a document. For more information, see *To permanently associate a locale with a document* on page 28.

The `GetContentLocale()` Web Intelligence function returns the document locale.

To display data using the document locale

1. Click **Web Intelligence Preferences** to display the Web Intelligence options.
2. Click **Use the document locale to format the data** beneath **When viewing a document**.

The preferred viewing locale

The preferred viewing locale is the locale that you choose to dislay data. The preferred viewing locale overrides the product locale if it is different from the product locale and your settings give the preferred viewing locale priority.

To set the preferred viewing locale

1. Click **Preferences** on the main InfoView toolbar.
2. Click **General** to display the general options.
3. Select the preferred viewing locale from the **Preferred viewing locale** list.
4. Click **Web Intelligence Preferences** to display the Web Intelligence options.
5. If you want data to be formatted using the preferred viewing locale, click **Use my Preferred Viewing Locale to format the data** beneath **When viewing a document**.

To permanently associate a locale with a document

1. In Web Intelligence Interactive, select **Document** > **Properties** from the menu to display the**" Document Properties"** dialog box.
2. Select **Permanent regional formatting**.
3. Save the document.

   The current document locale is associated permanently with the document and overrides the product locale and the preferred viewing locale.

To switch between viewing modes

chapter 3

You can view Web Intelligence reports in different modes depending on how you want to work with data and how you want the data to appear.

1. In Web Intelligence Interactive, select the report tab of the report you want to view.
2. Click the arrow next to the **View** button on the main toolbar above the report.
3. Select the viewing mode.

   Web Intelligence Interactive displays the report in the selected viewing mode.
4. In the Java Report Panel, use **Switch Page/Quick Display** on the **Reporting** toolbar to alternate between Page mode and Quick Display mode.

Draft mode

Draft mode displays just the tables, reports, and free standing cells in reports.

Use Draft mode when you want to focus on analyzing results, add calculations or formulas, or add breaks or sorts to tables to organize results.

Page mode

Page mode displays the page layout of reports, including page margins, headers, and footers.

Use Page mode when you want to fine-tune the formatting of tables and charts and the layout of report pages.

PDF mode

PDF mode displays the report in PDF format.

Use PDF mode when you want to view the report in PDF format or print the report from within Adobe® Acrobat® Reader®.

Quick Display mode

Quick Display mode is the default display mode in Web Intelligence. It is a pagination mode that is based on the data, rather than the physical size of report pages. Quick Display mode displays just the tables, reports, and free standing cells in reports and displays a maximum number of records vertically and horizontally, depending on the Quick Display settings. Quick Display mode also specifies the minimum page width and height and the amount of padding around the edges of the report.

Because Quick display mode retricts the number of horizontal and vertical rows, a report might not contain all possible data.

Use Quick Display mode when you want to focus on analyzing results, add calculations or formulas, or add breaks or sorts to tables to organize results.

The Quick Display mode properties are configurable either by your administrator in the CMC, or directly in Web Intelligence.

Property	Where configured
Maximum vertical records	CMC
Maximum horizontal records	CMC
Minimum page width	CMC
Minimum page height	CMC
Right padding	CMC
Bottom padding	CMC
Vertical records per page	Web Intelligence
Horizontal records per page	Web Intelligence

To change Quick Display mode settings in Web Intelligence

You can change the number of horizontal and vertical records per page in Quick Display mode in Web Intelligence.

1. In the Java Report Panel, set the **Page Content** > **Vertical Records per page** and **Page Content** > **Horizontal Records per page** properties.
2. In Web Intelligence Interactive, right-click the report background, select **Format Report** to display the **"Format Report"** dialog box, and set the **Number of vertical records per page** and **Number of horizontal records per page** in the **General** tab.
3. As a shortcut, you can also use the icons on the Page Navigation toolbar (Java Report Panel) or main toolbar (Web Intelligence Interactive) to increase or decrease these settings by increments of 50.

To select Enhanced Viewing mode

chapter 4

Your administrator can define minimum page margins, headers and footers that are applied only when you view reports onscreen. This means that the maximum amount of information on report pages is visible when you view reports via your computer screen. To apply the page definition set up by your administrator you need to select Enhanced Viewing mode.

1. Select **Document** > **Properties** (in Web Intelligence Interactive) or right-click a report and select **Document Properties** (in the Java Report Panel).
2. Select **Enhanced viewing mode**.

Working with reports

chapter 5

Organizing reports

To insert a new report in Web Intelligence

1. With a Web Intelligence document open, right-click the report tab of the report after which you want to insert a new report.

   The contextual menu appears.

2. Select **Insert**.

   A blank report appears after the report you selected. Web Intelligence numbers the report according to where it is located in the document.

To duplicate a report in Web Intelligence

1. With a Web Intelligence document open, right-click the report tab of the report after which you want to insert a new report.

   The contextual menu appears.

2. Select **Duplicate**.

   Web Intelligence inserts a duplicate of the report into the document.

To move a report in Web Intelligence

1. With a Web Intelligence document open, right-click the report tab of the report after which you want to insert a new report.

   The contextual menu appears.

2. Select **Move**.

   A sub-menu appears. You can select where you want to move the report here.

3. Click the appropriate option.
   - To move the report to the beginning of the document, click **First**.
   - To move the report before the selected report, click **Previous**.
   - To move the report after the selected report, click **Next**.
   - To move the report to the end of the document, click **Last**.

To delete a report in Web Intelligence

1. With a Web Intelligence document open, right-click the report tab of the report after which you want to insert a new report.

   The contextual menu appears.
2. Select **Remove**.

To rename a report in Web Intelligence

1. Double-click the report tab and type the new report name on the report tab, or:
2. Right-click an empty area of the report and click **Format Report** to display the **"Format Report"** dialog box.
3. Type the report name in the **Name** box on the **General** tab, then click **OK**.

Defining the page layout of reports

To set report margins in Web Intelligence

1. Right-click an empty area of the report and click **Format Report** to display the **Format Report** dialog box.
2. Click the **Layout Properties** tab
3. In the **Margins** section, type the measurement you want for the **Top**, **Bottom**, **Left** and **Right** margins.
4. Click **OK**.

To set the page orientation of reports in Web Intelligence

1. Right-click an empty area of the report and click **Format Report** to display the **Format Report** dialog box.
2. Click the **Layout Properties** tab.

3. In the **Orientation** section, click the arrow next to the list box, and then select **Portrait** or **Landscape** as appropriate:
4. Click **OK**.

To select the report paper size in Web Intelligence

1. Right-click an empty area of the report and click **Format Report** to display the **Format Report** dialog box.
2. Click the **Layout Properties** tab.
3. In the **Page size** section, click the arrow next to the list box, and then select the appropriate page size.

To include report page headers and footers in Web Intelligence

1. Right-click an empty area of the report and click **Format Report** to display the **Format Report** dialog box.
2. Click the **General** tab.
3. To include a page header, select **Show header**, and then type the height you want for the header into the text box.
4. To include a page header, select **Show footer**, and then type the height you want for the footer into the text box.
5. To define a background color for the header or footer, click the arrow next to **Background color**, and then either select a predefined color or click **More colors...** to define a custom color, and then click **OK**.
6. Click **OK**.

To include report page numbers in Web Intelligence

1. To display the **Document Properties** pane, click the **Show left pane** arrow at the top left of the report.
2. Click the arrow to the right of the drop-down list box, then select **Chart and Table Types**.
3. Select the appropriate page number cell from the **Page Number Cells** folder and drag it onto the report.

- To display the page number of the current report page (for example 1), select **Page Number**.
- To display the page number of the current report page over the total number of pages in the report (for example 1/50), select **Page Number/Total Pages**.
- To display the total number of pages in the current report (for example 50), select **Total Number of Pages**.

To add and format a report title in Web Intelligence

1. To display the **Document Properties** pane, click the **Show left pane** arrow at the top left of the report.
2. Click the arrow to the right of the drop-down list box, then select **Chart and Table Types**.
3. Select the **Blank Cell** format from the **Formula and Text Cells** folder and drag it onto the area of the report page where you want to display the report title.

   The blank cell appears on the report
4. Right-click the cell and select **Format** > **Cell** .

   The **"Format Cells"** dialog box appears.
5. Click the **General** tab.
6. Type the title you want to give the report into the **Name** text box
7. In the **Size** section, specify the width and height of the report title cell and select **Wrap text**, if you want to continue the title onto the next line.
8. To format how the text and cell background appears, click the **Font** tab, and then select the appropriate settings.
9. To format how the borders around the page number cell appear, click the **Border** tab, and then select the appropriate settings for borders.

   You can apply the same colors and styles to all borders in the **Setting applied to all borders** section. You can also apply specific colors and styles to one or multiple borders using the options in the **Settings per border** section.
10. To align the page number text on the cell, click the **Alignment** tab, and then specify the appropriate horizontal and vertical alignment settings.
11. Click **OK**.

To include cells with predefined or custom formulas in reports in Web Intelligence

1. To display the **Document Properties** pane, click the **Show left pane** arrow at the top left of the report.
2. Click the arrow to the right of the drop-down list box, then select **Chart and Table Types**.
3. Select the formula cell you want to include on the report from the **Formula and Text Cells** folder and drag it onto the report.
   - If you want to display drill filters, select **Drill Filters**.
   - If you want to display the date the last time the results in reports were refreshed with up-to-date data on the database, select **Last Refresh Date**.
   - If you want to display the title of the document as it is listed in InfoView, select **Document Name**.
   - If you want to include a custom formula, select **Blank Cell**, then select the cell in the report and type the formula in the Formula Bar.

   The cell appears on the report with the predefined or custom formula.

Including images in reports

To select an image to display on a report background in Web Intelligence

1. Right click the report and select **Format Report** on the menu to display the **"Format Report"** dialog box.
2. Click the **Appearance** tab.
3. Select **Image from URL** and type the URL to specify the image using a URL.
4. Select **Image from file**, click **Add** then browse to the image to select an image from the file system.
5. Click the arrow to the right of the **Display** drop-down list box, and then select how you want the image to be displayed.
6. Align the image using the **Position** drop-down lists.

Note: The availability of the lists depends on the option chosen in the **Display** list.

7. Click **OK**.

Specifying an image URL in Web Intelligence

There are two ways to specify an image URL in Web Intelligence:

- If the image file has been installed by your administrator in the images directory on the BusinessObjects Enterprise server (located at `<INSTALL DIR>\Images`), type `boimg://` followed by the file name (for example, `boimg:// efashion_logo.gif`).
- If the image file is located on another web server, type the URL (for example, `http://www.internal.businesscompany.com/images/company_logo.gif`).

To insert an image in a free-standing cell in a report in Web Intelligence

1. To display the **Document Properties** pane, click the **Show left pane** arrow at the top left of the report.
2. Click the arrow to the right of the drop-down list box, then select **Chart and Table Types**.
3. Select **Blank Cell** from the **Formula and Text Cells** folder and drag it onto the report.
4. Right-click the cell and click **Format** > **Cell** to display the Format Cell dialog box.
5. Click the **Appearance** tab.
6. Select **Image from URL** and type the URL to specify the image using a URL.
7. Select **Image from file**, click **Add** then browse to the image to select an image from the file system.
8. Click the arrow to the right of the **Display** drop-down list box, and then select how you want the image to be displayed.
9. Align the image using the **Position** drop-down lists.

Note: The availability of the lists depends on the option chosen in the **Display** list.

10. Click **OK**.

Image display options in Web Intelligence

Option	Description
Normal	Displays the image once at the top left of the report, section, table, or cell.
Stretch (PDF only)	Stretches the image over the entire report area. **Note:** this option is only applied when you view or save the report as a PDF file.
Tile	Repeats the image vertically and horizontally.
Horizontal tile	Repeat the image horizontally across.
Vertical tile	Repeat the image vertically downward.

Note: The size of the image is defined when the image is created. You cannot modify the size of the image using Web Intelligence.

Merging dimensions from multiple data providers

chapter 6

Merged dimensions defined

You can include multiple data providers in a Web Intelligence document. You often need to synchronize the data returned by these data providers. You do this by incorporating common dimensions into a merged dimension.

Merged dimensions and data synchronization were introduced in Web Intelligence XI R2. They enormously increase the power and flexibility of Web Intelligence by allowing you to synthesise data from different sources in the same report, rather than simply including the data.

For example, if you have one database that contains detailed customer information and another database that contains sales data, you can synchronize the two data sources around the customer.

When to merge dimensions

You merge dimensions when your report draws related data from different data providers. For example, you have a report showing revenue and sales targets. The report contains sections based on the year, and each section shows revenue and sales targets. If revenue and sales target data comes from two different data providers, Web Intelligence does not know that it is related. You tell Web Intelligence that the data is related by merging the two data providers on the common dimension, year.

When you merge dimensions, Web Intelligence creates a new dimension that contains all the values from the original dimensions that make up the merged dimension. You use this dimension in reports as you use any other report object. You can add report objects from all the data providers synchronized through the merged dimension in the same block as the merged dimension.

Choosing which dimensions to merge

The only restriction that Web Intelligence imposes on merged dimensions is that they must be of the same data type: for example, character data. But it does not make sense to merge unrelated dimensions even when their data types are the same. For example, it does not make sense to merge a

dimension containing customer names with a dimension containing sales regions.

Merged dimensions often have the same name in both data sources, but this is not obligatory. It can make sense to merge dimensions with different names if they contain related data.

To merge dimensions correctly you need to be aware of the semantics of the data (what the data refers to) in the different data sources. The dimension data types and names are an approximate guide only to dimensions' suitability for merging.

Creating, editing and deleting merged dimensions

To merge dimensions in Web Intelligence

1. Select the group of dimensions from different data providers that you want to merge in the Available Objects section of the Left Panel by holding down the Ctrl key as you select the dimensions.
2. Click **Merge** at the top of the Left Panel.

   Web Intelligence creates a merged dimension with the same name, description, qualification and data type as the first dimension you selected.

   The original dimensions that make up the merged dimension appear beneath it when you expand the merged dimension.

   If you select any of these original dimensions, **Merge**/**Unmerge** is unavailable.

To merge dimensions automatically in Web Intelligence

You can set Web Intelligence to merge dimensions automatically under the following circumstances:

- The dimensions have the same name
- The dimensions have the same data type

- The dimensions are in the same universe

1. With a Web Intelligence document open, click the arrow next to Document on the main toolbar above the report.
2. Select **Properties**.

   The **"Document Properties"** dialog box appears.
3. Select **Auto-merge dimensions**.

To edit a merged dimension in Web Intelligence

1. Right-click the merged dimension in the **Available Objects** section of the Left Panel then select **Edit Properties** on the menu to display the **"Create Merged Dimension"** dialog box.
2. Type the merged dimension name in the **Merged Dimension Name** in the **Merged Dimension** dialog box.
3. Type the description in the **"Description"** box.
4. Select the dimension that provides default properties for the merged dimension in the **"Source Dimension"** dialog box.

To delete a merged dimension in Web Intelligence

1. Select the merged dimension in the **Available Objects** section of the Left Panel.

   The **Merge** button at the top of the Left Panel becomes the Unmerge button when you select a merged dimension.
2. Click **Unmerge**.

Understanding the effects of merged dimensions

Data synchronization through merged dimensions adds enormous power to Web Intelligence. Merged dimensions also have implications for the results that Web Intelligence displays in certain situations. You need to understand these implications to work effectively with merged dimensions and synchronized data.

Synchronizing data providers with different aggregation levels

You can synchronize data providers with different aggregation levels. This can have implications for the way in which Web Intelligence calculates measures.

Example: Synchronizing data providers with different aggregation levels

In this example you have two data providers as follows:

Customer	Year	Revenue
Jones	2004	1500
Jones	2005	2000
Smith	2005	1200

Customer	Number of sales
Jones	12
Smith	10

If you merge the two data providers and the table properties **Avoid Duplicate Rows Aggregation** and **Show Rows with Empty Dimensions** are unchecked, Web Intelligence returns the following:

Customer	Year	Revenue	Number of sales
Jones	2004	1500	12
Jones	2005	1200	12
Smith	2005	1200	10

Web Intelligence cannot determine the number of sales per year for customer Jones because the data provider that stores the number of sales does not break them down by year. Web Intelligence therefore reproduces the total number of sales on each row.

Note: Although the Number of Sales values are duplicated, if you add a standard calculation to the bottom of the column (for example a Sum or Average calculation), the result is correct.

One way of adressing this issue is to add the dimensions to the second data provider that allow Web Intelligence to calculate to the appropriate level of data. If this is not possible, you must be aware of any situations where Web Intelligence cannot aggregate the data to the necessary level of detail.

Detail objects and merged dimensions

Detail objects are associated with dimensions and provide additional information about the dimension.

Web Intelligence XI R2 requires a one-to-one relationship between dimensions and details (this means that a detail object can have one value only for each value of its associated dimension) and does not take detail objects into account when synchronizing data. The following example illustrates why this is necessary.

Previous versions of Web Intelligence, as well as Desktop Intelligence and BusinessObjects, allow a one-to-many relationship between dimensions and details. If you migrate a report created using any of these products and the detail object contains multiple values, Web Intelligence places the #MULTIVALUE error in the detail cell.

Example: Synchronizing data providers with detail objects

In this example you have two data providers as follows, and [Address] is a detail object related to [Customer].

Customer	Address	Revenue
John	London	10000

Customer	Address	Revenue
Paul	Liverpool	15000

Customer	Age
John	25
Paul	28

If you create a merged Customer dimension to synchronize the data providers, and Address can have more than one value for each customer, the result is ambiguous because there is no common value around which WebIntelligence can synchronize the data.

For example, Paul might also have an address in London, which means that there is no unique ‘Paul’ row with which WebIntelligence can synchronize Paul’s age:

Customer	Address	Age
John	London	
Paul	Paris	
Paul	London	
John		25
Paul		28

If the relationship between Customer and Address is one-to-one, WebIntelligence can ignore Address in the synchronization. This removes the ambiguity:

Customer	Address	Age
John		25
Paul		28

Filtering merged dimensions

Merging dimensions has implications for the way in which Web Intelligence applies filters.

Note: You cannot apply a filter a on merged dimension. You apply filters on the dimensions that make up the merged dimension.

Report filters and merged dimensions

When you apply a report filter to a dimension that is part of a merged dimension, Web Intelligence applies the filter to all data providers that are synchronized through the merged dimension.

Example: Filtering a merged dimension

In this example you have a report with the following data providers, which are merged on the Country dimension

Country	Resort	Revenue
France	French Riviera	835,420
US	Bahamas Beach	971,444
US	Hawaiian Club	1,479,660

Country	Future Guests
France	46
US	56

If you apply the filter Country=”US” to the first block, Web Intelligence also filters the second block to give the following result:

Country	Future Guests
US	56

If the Country dimensions are not merged the second block is unaffected by the filter.

Section filters and merged dimensions

When a dimension that is part of a merged dimension is set as a section header, any filter applied to the section also applies to blocks from synchronized data providers within the section. If Country is set as the section header in the example *Filtering a merged dimension* on page 50 and the filter Country=”US” is applied to the section, Web Intelligence filters both blocks in the section—(Resort, Revenue) and (Country, Number of Guests)—so that only those rows appear where the country dimension is equal to “US”, even though Country in the second block comes from a synchronized data provider.

Block filters and merged dimensions

When you apply a block filter to a dimension that is part of a merged dimension, Web Intelligence applies the filter to the block. Web Intelligence does not apply the filter to other data providers synchronized through the merged dimension.

Drilling on merged dimensions

When you merge dimensions, the new merged dimension belongs to the hierarchies of all dimensions involved in the merge.

Filtering reports

chapter 7

Report filters defined

You can filter reports to limit the results that are displayed to specific information that interests you. For example, you can limit the displayed results to information for a specific customer or a sales period. The data you filter out remains within the Web Intelligence document; it is simply not displayed in the report tables or charts. This means you can change or remove report filters in order to view the hidden values, without modifying the query definition behind the document.

You can apply different filters to different parts of a report. For example, you can limit the results in the entire report to a specific product line and then limit results in a table or chart further to focus on results for a specific region or customer profile.

To create a report filter, you need to specify three elements:

- a filtered object
- an operator
- a value(s)

You can include multiple filters in a report.

Query filters and report filters compared

You can apply filters at two levels within a document:

- query filters – these filters are defined on the query; they limit the data retrieved from the data source and returned to the Web Intelligence document.
- report filters – these filters limit the values displayed on reports, tables, charts, sections within the document, but they don't modify the data that is retrieved from the data source; they simply hide values at the report level.

Report filter operators

Equal To operator

Use the Equal to operator to obtain data equal to a value.

For example, to return data for the US only, create the filter "County Equal To US".

Not Equal To operator

Use the Not Equal To operator to obtain data not equal to a value.

For example, to return data for all countries except the US create the filter "County Not Equal To US".

Different From operator

Use the Different From operator to retrieve data different from a value.

For example, to retrieve data for all quarters execpt Q4, create the filter [Quarter] Different From "Q4"

Greater Than operator

Use the Greater Than operator to retrieve data greater than a value.

For example, to retrieve data for customers aged over 60, create the filter "[Customer Age] Greater than 60".

Greater Than Or Equal To operator

Use the Greater Than Or Equal To operator to retrieve data greater than or equal to a value.

For example, to retrieve data for revenue starting from $1.5M, create the filter "[Revenue] Greater than or equal to 1000500".

Less Than operator

Use the Less Than operator to retrieve data lower than a value.

For example, to retrieve data for exam grades lower than 40, create the filter "[Exam Grade] Less Than 40".

Less Than Or Equal To operator

Use the Less Than Or Equal To operator to retrieve data less than or equal to a value.

For example, to retrieve data for customers whose age is 30 or less, create the filter "[Age] Less Than Or Equal To 30".

Between operator

Use the Between operator to retrieve data between and including two values.

For example, to retrieve data for weeks starting at week 25 and finishing at 36 (including week 25 and week 36), create the filter "[Week] Between 25 and 36".

Not Between operator

Use the Not Between operator to retrieve data outside the range of two values.

For example; to retrieve data for all the weeks of the year, except for and not including weeks 25 through 36, create the filter "[Week] Not between 25 and 36".

In List operator

Use the In List operator to retrieve data corresponding to values in a list of values.

For example, to retrieve data for the US, UK and Japan only, create the filter [Country] In List ("US";"UK";"Japan").

Not In List operator

Use the Not In List operator to retrieve data that does not correspond to multiple values.

For example, if you do not want to retrieve data for the US, UK and Japan, create the filter [Country] Not In ("US";"UK";"Japan").

Is Null operator

Use the Is Null operator to retrieve data for which there are no values in the database.

For example, to retrieve customers without children (the children column in the database has no value), create the filter [Children] Is Null.

Is Not Null operator

Use the Is Not Null operator to return data for which there is a value in the database.

For example, to return customers with children, create the filter [Children] Is not Null.

Creating, editing and deleting report filters

To create a report filter in Web Intelligence

1. Select the report element (for example a table or section) you want to filter. To filter the entire report, click outside all tables, sections and charts.
2. Click the arrow to the right of the Filter button on the Reporting toolbar and click **Add Filter**.

   The **"Filter"** dialog box appears
3. Select the operator you wish to use in the filter from the drop-down list.
4. Select the values that you wish to use in the filter and click **>>** to add them to the list of filter values
5. To remove a value from the filter, select the value in the list of filter values, then click **<<**.
6. Click **OK** to close the dialog box and apply the report filter.

To view the report filters in a Web Intelligence report

1. Display the **Document Structure and Filters** pane by selecting **Left panel** from the **View** menu then selecting **Document Structure and Filters** at the bottom of the Left panel.
2. The **Document Structure and Filters** displays the overview of the filters in the report.

To edit a report filter in a Web Intelligence report

1. Display the **Document Structure and Filters** pane by selecting **Left panel** from the **View** menu then selecting **Document Structure and Filters** at the bottom of the Left panel.
2. Navigate to the filter in the **Document Structure and Filters** pane, right-click it and select **Edit Filter** to display the Filter Editor.
3. Edit the filter using the Filter Editor.

To edit one dimension in a report filter in Web Intelligence

1. Display the **Document Structure and Filters** pane by selecting **Left panel** from the **View** menu then selecting **Document Structure and Filters** at the bottom of the Left panel.
2. Select the filtered dimension in the **Document Structure and Filters** pane.
3. Click **Edit**.

   The Filter Editor appears.
4. Use the Filter Editor to edit the filter.

To delete a report filter in Web Intelligence

1. Display the **Document Structure and Filters** overview by selecting **Left Panel** from the **View** menu then selecting **Document Structure and Filters** at the bottom of the Left Panel.
2. Select the filter you want to remove
3. Click **Remove** or right-click the filter and select **Remove Filter**.

   You can also remove individual parts of the filter by selecting the dimension, detail or measure individually then clicking **Remove** or clicking the arrow to the right of **Apply Filter** on the **Reporting** toolbar, then selecting **Remove Filter**.

Combining and nesting report filters

The AND and OR operators

You use the AND and OR operators to combine and nest query filters or report filters. When you use AND to combine filters, Web Intelligence displays only the data that matches the criteria in both the filters linked by the operator. When you use OR, Web Intelligence returns the data that matches the criteria in either one of the filters linked by the operator.

You can mix the AND and OR operators when combining and nesting filters. For example, you can link three filters in the relationship (Filter1 OR Filter2) AND Filter3. In this case, Web Intelligence first restricts the data by the conditions in either Filter1 or Filter2. Web Intelligence then compares this data with the condition in Filter3 and returns only the data that corresponds to this condition.

To combine report filters in Web Intelligence

1. Display the **Document Structure and Filters** overview by selecting **Left panel** from the **View** menu then selecting **Document Structure and Filters** from the drop down list at the top of the Left panel.
2. Select the table that you want to filter in the **Document Structure and Filters** overview.
3. Click **Add Filter**.

   The Filter Editor appears.
4. Select the dimension, detail or measure that you want to include in the filter, then click **>>** or drag the filter to the **Filter** pane to add it to the filter.
5. To remove a dimension, detail or measure from the filter, select it in the **Filter** pane, then click **<<** or drag the dimension, detail or measure back to the **Available Objects** pane.
6. Select the dimension, detail or measure in the **Filter** pane.
7. Select the operator that you want to use with the dimension, detail or measure from the drop down list of operators.
8. Type the value or values that you want to associate with the operator or click **Values** to display the **Quick Filter** dialog box that you use to select the values by which to filter.
9. Click **Update Filter**.

   The filter on the dimension, detail or measure is updated in the **Filter** pane. For example, if you filtered the Country dimension to return only those rows where the country is ‘US’, the text reads ‘Country Equal To US’.
10. Repeat from step 4 for all dimensions, details and measures that you want to include in the filter.

    When you add multiple dimensions, details or measures, Web Intelligence links them by default with the AND operator. To toggle between AND and OR, double click the operator.

Related Topics

- *The AND and OR operators* on page 59

To nest report filters in Web Intelligence

When you nest filters you set up an order of precedence between them. Web Intelligence executes the first filter in the order or precedence, then applies subsequent filters. (Country = 'US' AND Resort = 'Bahamas Beach') OR (Revenue > 500000) is an example of combined and nested filters. Web Intelligence filters according to the nested filter Country = US AND Resort = Bahamas Beach (which is also an example of a combined filter) then applies this filter along with the combined filter Revenue > 500000.

1. Create the initial filter.
2. Select the dimension in the initial filter. (Select any of the dimensions or operators in the initial filter if it is a combined filter.)
3. Click **Add Nested Filter**.

   Web Intelligence adds a nested OR operator to the initial filter.
4. Select the OR operator.
5. Double click the OR operator to change it to AND if you want your nested filter to be linked to the initial filter by an AND operator.
6. Select the dimension(s) that you want to appear in the nested filter and click **>>**, or drag them to the right of the operator that links the nested filter to the initial filter.

To change the order of nested report filters in Web Intelligence

1. Select a dimension, detail or measure in the filter.
2. Click **Move up** or **Move down** to change the place of the dimension, detail or measure.

Drilling on report data

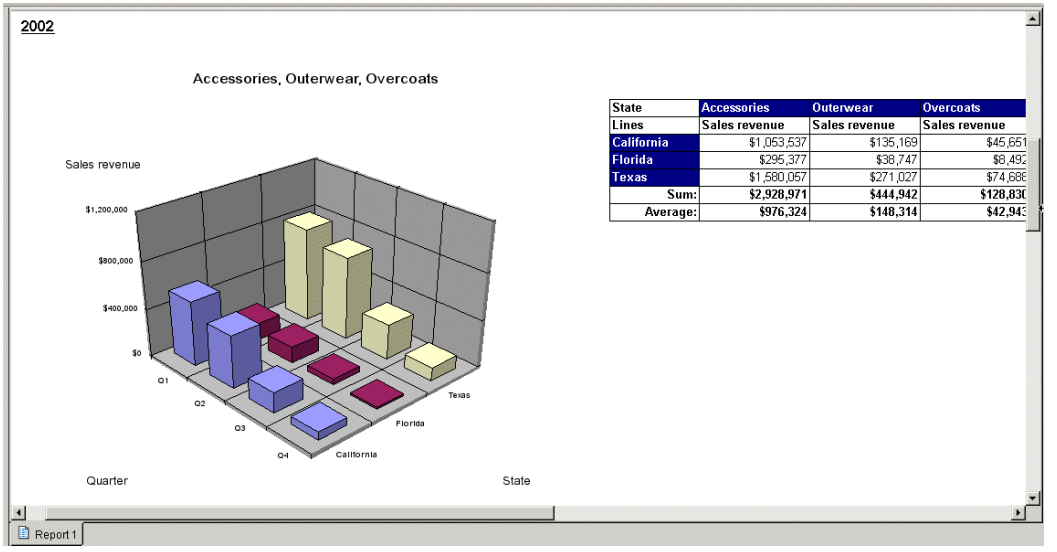
chapter 8

What is drill?

You use drill to analyze the results displayed in reports. Drilling on reports lets you look deeper into your data to discover the details behind a good or bad summary result displayed in tables, charts, or sections.

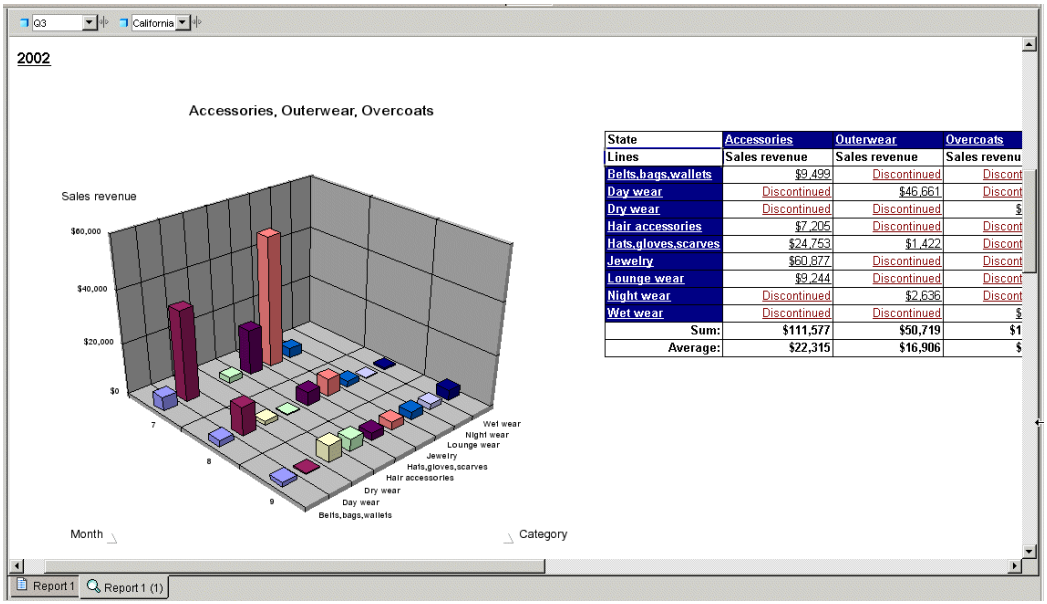
Example: Why did sales of accessories, outwear, and overcoats rise in Q3?

You work for a US national fashion retail chain, and are in charge of sales of accessories, outerwear and overcoat clothing lines in western states. You see that revenue is much higher for Q3 than the other quarters.



State	Accessories	Outerwear	Overcoats
Lines	Sales revenue	Sales revenue	Sales revenue
California	$1,053,537	$135,169	$45,651
Florida	$295,377	$38,747	$8,492
Texas	$1,580,057	$271,027	$74,688
Sum:	$2,928,971	$444,942	$128,830
Average:	$976,324	$148,314	$42,943

To understand why, you drill down to look at the factors behind the result.



State	Accessories	Outerwear	Overcoats
Lines	Sales revenue	Sales revenue	Sales revenu
Belts,bags,wallets	$9,499	Discontinued	Discont
Day wear	Discontinued	$46,661	Discont
Dry wear	Discontinued	Discontinued	$
Hair accessories	$7,205	Discontinued	Discont
Hats,gloves,scarves	$24,753	$1,422	Discont
Jewelry	$60,877	Discontinued	Discont
Lounge wear	$9,244	Discontinued	Discont
Night wear	Discontinued	$2,636	Discont
Wet wear	Discontinued	Discontinued	$
Sum:	$111,577	$50,719	$1
Average:	$22,315	$16,906	$

You see that jewelry sales escalated in July (month #7).

Scope of analysis

The scope of analysis for a query is extra data that you can retrieve from the database to give more details on the results returned by each of the objects in a query. This extra data does not appear in the initial result report, but it remains available in the data cube, so you can pull this data in to the report to allow you to access more detail at any time. This process of refining the data to lower levels of detail is called drilling down on an object.

In the universe, the scope of analysis corresponds to the hierarchical levels below the object selected for a query. For example, a scope of analysis of one level down for the object Year, would include the object Quarter, which appears immediately under Year.

You can set this level when you build a query. It allows objects lower down the hierarchy to be included in the query, without them appearing in the **Results Objects** pane. The hierarchies in a universe allow you to choose your scope of analysis, and correspondingly the level of drill available.

In the Java Report Panel and in Web Intelligence Rich Client, you can also create a custom scope of analysis by selecting specific dimensions for the **Scope of Analysis** pane.

Note: You cannot set the scope of analysis when working in query drill mode because this drill mode causes Web Intelligence to modify the scope dynamically in response to drill actions.

Levels of scope of analysis

You can set the following levels for scope of analysis:

Level	Description
None	Only the objects that appear in the **Results Objects** pane are included in the query.
• One level down • Two levels down • Three levels down	For each object in the **Result Objects** pane, one, two, or three objects lower down the hierarchy tree are included in the query. The data from these objects is stored in the cube until you add them to the document.
Custom **Note:** This option is available in the Java Report Panel and in Web Intelligence Rich Client only.	All objects added manually to the Scope of Analysis panel are included in the query.

Including a scope of analysis in a document increases the document size significantly. This is because the data necessary for the scope you specify is saved with the document, even though it is not visible in the reports unless you start drill mode and drill down to the data to display the corresponding values.

In order to minimize the size of documents and optimize performance, we recommend that you only include a scope of analysis in documents where you are certain that users will need to drill.

We suggest the following method because it will be easier for you to set the scope of analysis seeing the hierarchy of the classes and objects.

Drill paths and hierarchies

When you analyze data in drill mode, you move along a drill path. These paths are based on the dimension hierarchies set by the designer of the universe. Universe designers organize objects in classes in a hierarchy with the most summary objects at the top and the most detailed at the bottom. So if you want to make a high-level report, you know that your query should include objects at the top of the list. If you want to see more detailed information, you can then switch to Drill mode and drill down on each dimension value displayed in the reports.

For example, if the data from [Quarter] did not sufficiently explain a result, you could drill down to [Month] or [Week], depending on how the universe designer set up the hierarchy. When you drill to a different level, measures, such as a [Revenue] or [Margin], are recalculated accordingly.

Drill paths usually follow the same hierarchy order as the classes on a universe. For example, a class called Time typically includes the [Year] dimension at the top of the class, followed by the [Quarter], [Month], and [Week] dimensions. The hierarchies for drill within the Time hierarchy typically follow the same order, because users want to drill annual results to analyze details for quarter, month, and so on. However, the universe designer can also define custom hierarchies.

Note: A dimension can belong to several hierarchies. When you drill a result on a dimension that belongs to more than one hierarchy, Web Intelligence prompts you to select the drill path.

To view drill hierarchies

1. Open a document in Edit mode.
2. Verify you are in Query View.
3. Click the **Data** tab.
4. Click the **Hierarchies** radio button.

To start and end drill mode in Web Intelligence

1. Click **Drill** on the main toolbar.

   A hyperlink appears on each drillable result.
2. Click **Drill** again to end drill mode.

Retrieving more levels of data to the report

When you are drilling a Web Intelligence report, you may want to drill up or down to a dimension that lies outside the scope of analysis defined for the document. To return the additional data, Web Intelligence must run a new query that includes the additional dimension(s) you specify. This is called extending the scope of analysis.

You can extend the scope of analysis during your drill sessions only if your security profile allows you to do so. Your security profile is controlled by your BusinessObjects Enterprise administrator.

If your Drill options are not set to display the Extend the Scope of Analysis prompt message during drill, you will not be given the option to select filters if you drill beyond the data already available in the document. In this case, Web Intelligence immediately runs a new query and returns data for all the values on the dimensions you are drilling.

To drill out of the scope of analysis

1. Hold your mouse cursor over a dimension value that is at the end of the scope of analysis.

   A ToolTip informs you that a new query is necessary to return the additional data to the document.
2. Drill on the dimension.

   If your Drill options are set for Web Intelligence to prompt you when a drill action requires a new query, the Extend the Scope of Analysis dialog box appears.

The dialog box lists the dimensions in the hierarchy above and below the drilled value. The dimensions already included in the document are checked. The dialog box also displays the filters that you can select to filter the new query.

3. Select the check boxes next to the dimensions you want to drill.
4. Select the check boxes next to the filters you want to use to filter the query.
5. Click **OK**.

   Web Intelligence runs a new query and returns the additional data to the document and the results for the dimension you drilled to appear on the table.

To choose a drill path when more than one is available

A dimension can belong to multiple hierarchies. When you drill down on such a dimension value, Web Intelligence does not know which drill path to follow. You must define the drill path.

Note: If the dimension value you choose to drill on is the result of a previous drill, the drill path is already known. Therefore you do not need to select a drill path.

1. Drill on the dimension.

   The **"Select Drill Path"** dialog box appears. The dialog box lists the dimensions in the hierarchy above and below the drilled value. A check box appears next to each dimensions below the current dimension you are drilling, so that you can select which of these dimensions you want to retrieve from the database, in order to continue your drill action. The dialog box also displays the filters that you can select to filter the new query.

2. Select the path you want to drill.
3. Click **OK**.

Drilling on dimensions in tables and sections

Dimensions typically represent character-type data, such as customer or business names, and dates. Web Intelligence makes calculations based on the dimensions in a report. For example, if you create a report that calculates a region's total sales revenue for a given year, Web Intelligence calculates the [Sales revenue] measure based on the two dimensions: [State] and [Year].

When you drill on a dimension to see the more data behind the displayed result, the sales revenue is calculated according to the values to which you drill. If you drill on [Year] in the above example, Web Intelligence calculates and displays sales revenue by state and quarter, because [Quarter] is the next dimension in the time hierarchy below [Year].

Note: You cannot drill on detail objects.

Drilling down

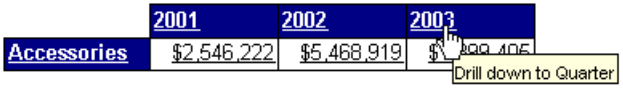
You drill down to see the lower-level data that makes up the summary results displayed on reports. This helps explain why high or low results occurred.

Example: Using drill analysis to find out why sales decreased dramatically in 2003

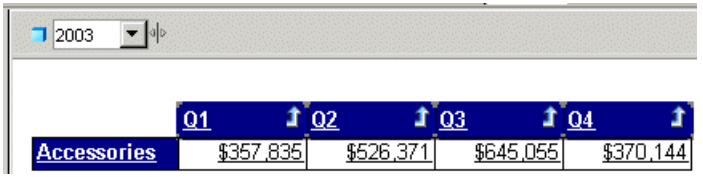
In this example, you receive a report that shows sales revenue results for the accessories line at the eFashion retail store. The following crosstab shows that the Accessories line decreased in 2003.

	2001	2002	2003
Accessories	$2,546,222	$5,468,919	$1,899,405

To analyze more precisely when the decrease occurred, you drill down on the cell value 2003, to view the detailed data for each quarter.

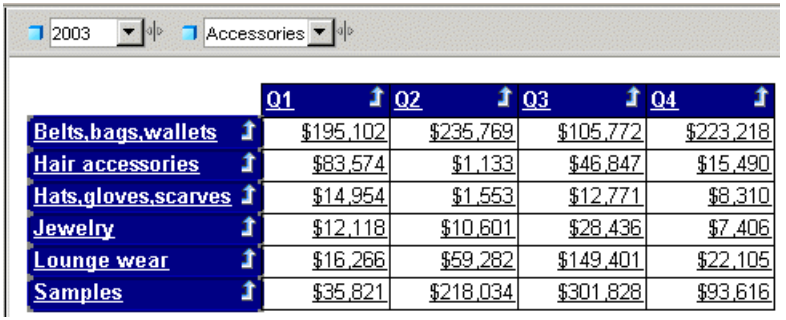


When you drill down on the cell value 2003, a filter appears in the Drill toolbar to show that the quarterly values you have drilled to are filtered for the year 2003. The drilled chart clearly shows that the problem arose in Q4 of 2003.



	Q1	Q2	Q3	Q4
Accessories	$357,835	$526,371	$645,055	$370,144

To find out which of the of the categories within the Accessories line was responsible for the drop in revenue, you drill down again on the cell value Accessories.



	Q1	Q2	Q3	Q4
Belts,bags,wallets	$195,102	$235,769	$105,772	$223,218
Hair accessories	$83,574	$1,133	$46,847	$15,490
Hats,gloves,scarves	$14,954	$1,553	$12,771	$8,310
Jewelry	$12,118	$10,601	$28,436	$7,406
Lounge wear	$16,266	$59,282	$149,401	$22,105
Samples	$35,821	$218,034	$301,828	$93,616

The drilled crosstab shows which categories were responsible for low revenue in Q4.

Note: If you try to drill to a dimension that is already displayed in another column or row of the same table, Web Intelligence automatically displays the next available dimension in the drill path.

To drill down on a dimension value in a table or section cell

1. Verify you are in Drill mode
2. On a table or section cell, place your pointer over the dimension value on which you want to drill.

A ToolTip appears, showing the next dimension in the drill path. If the drilled report includes dimensions from multiple data providers, the ToolTip displays the name of the query and the dimension for the value.

3. Click the value.

   The drilled table or section displays data one dimension level down. The Drill toolbar, at the top of the report, displays the values from which you drilled. These values filter the values displayed on the drilled table.

Drilling up

You drill up on a dimension value to see how the more detailed data aggregates to a higher-level result. For example, you may have drilled down on Year to examine data for each quarter. If you want to see how this data aggregates to yearly results, you can drill up.

When you drill up on a dimension value, you move along the drill path from lower- to higher-level data. For example, you may have drilled down on [Year] to [Quarter]. If you drill up on [Quarter], you return to [Year].

You can only drill up on a dimension value if you have previously drilled down to that dimension, or you have defined the appropriate drill path in the scope of analysis.

To drill up on a dimension value

1. Verify you are in Drill mode.
2. On a table or section cell, right-click the dimension value on which you want to drill up, then on the shortcut menu click **Drill up** , or click the Drill Up icon next to the dimension value you want to drill up.

   If the table is a crosstab without headers that display the names of the dimensions on the table, then the Drill Up icon appears next to each value from which you can drill up.

   The report now displays data one dimension level up. The filters that filtered the value you drilled up from, are removed from the Drill toolbar.

Drilling by

When you drill down or up, you move through a hierarchy one dimension at a time. However, you can get another view of the data by slicing it in a different way, and then look at the data in other hierarchies. To do this, you drill by the other dimensions that interest you.

Note: You can only Drill by to a dimension that is included in the scope of analysis of the document.

Example: Drilling by the Products hierarchy to slice sales revenue results by product

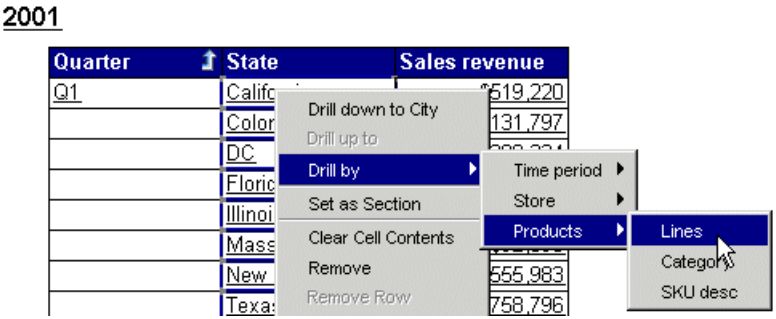
You work as regional manager for California in a retail clothing store, and have been sent the following report that shows quarterly sales revenue by state:

2001

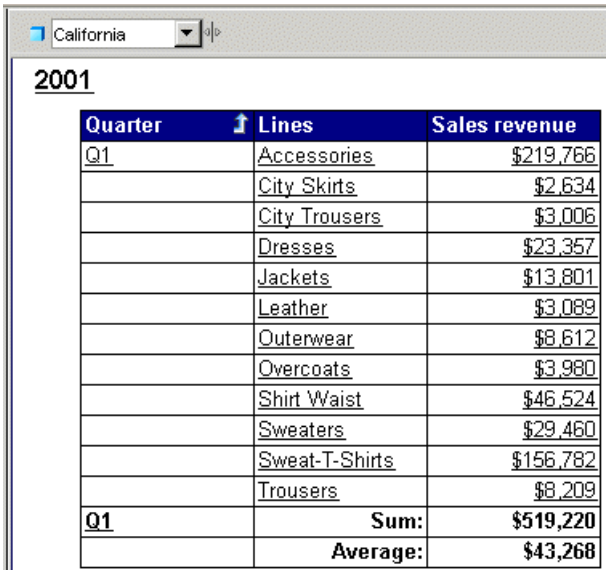
Quarter	State	Sales revenue
Q1	California	$519,220
	Colorado	$131,797
	DC	$208,324
	Florida	$137,530
	Illinois	$256,454
	Massachusetts	$92,595
	New York	$555,983
	Texas	$758,796
Q1	**Sum:**	**$2,660,699**
	Average:	**$332,587**

You are only interested in analyzing the results in the state of California. In addition, you want to analyze the sales revenue broken down by each product line you sell. To drill on California data, you place your pointer on the table cell that says California.

If you drilled down now, however, you would drill to results for each city within California, because [City] is the dimension below [State]. Instead, you select Drill by from the drill menu and then you navigate through the dimensions on the Products hierarchy by selecting the sub-menus until you reach the [Lines] dimension.



The drilled report displays the detailed sales revenue results for each product line sold in California.



Quarter	Lines	Sales revenue
Q1	Accessories	$219,766
	City Skirts	$2,634
	City Trousers	$3,006
	Dresses	$23,357
	Jackets	$13,801
	Leather	$3,089
	Outerwear	$8,612
	Overcoats	$3,980
	Shirt Waist	$46,524
	Sweaters	$29,460
	Sweat-T-Shirts	$156,782
	Trousers	$8,209
Q1	**Sum:**	**$519,220**
	Average:	**$43,268**

To drill by a dimension value

1. Verify you are in Drill mode.
2. On a table or section cell, right-click the dimension value you want to drill by.

   A shortcut menu appears, displaying the available drill paths.

3. Place your pointer on **Drill by**, then on the class to which you want to drill.
4. Click the dimension to which you want to drill.

   The report now displays data for the dimension to which you drilled.

Drilling on measures in tables and sections

When you drill on a measure value, Web Intelligence performs the drill action one level down for each related dimension in the block and displays the new measure calculation for the displayed dimensions.

Example: Drill on annual sales revenue results to see the breakdown by city and quarter

For example, you drill down on the year 2003 sales revenue value for California, which is displayed on a crosstab that shows sales revenue by year in by state.

The drilled report displays sales revenue by quarter by city for California – the state on which you drilled.

To drill down on a measure value

1. Verify you are in Drill mode.
2. Place your pointer over the measure value on which you want to drill.

   A ToolTip appears, displaying the next dimension(s) in each related drill path

3. Click the measure value.

   Your report now displays data one dimension level down. The table headers display the names of the dimensions you drilled to and the drill up arrow, which indicates you can drill back up to the summary results if wished. The Drill toolbar displays the values that filter the results displayed on the drilled table or section.

To drill up on a measure value

1. Verify you are in Drill mode.
2. Right-click the measure value on which you want to drill up, then click the **Drill up** option on the shortcut menu, or click the **Drill Up** icon next to the measure value you want to analyze.

   The drilled table now displays data one dimension level up.

Synchronizing drill across multiple tables and charts

A Web Intelligence report can contain several tables or charts. The generic term used to refer to tables and charts in this guide is a block. There are two ways to drill on a report with multiple blocks:

- drill simultaneously on each block in the report the contains the drilled dimension
- drill on only the current block of data

You set how Web Intelligence performs drill on reports with the *Synchronize drill on report blocks option* on page 25.

If you set Web Intelligence to synchronize drilling across a report, you drill on each block in the report containing that drilled dimension. The next dimension in the drill path replaces the previous dimension in all blocks of the report.

If you set Web Intelligence not to synchronize drilling on all blocks in a report, the next dimension in the drill path replaces the previous dimension only in the current block of the report.

Drilling on charts

Drilling down, up, or by on a chart, provides you with a graphical explanation for why summary results are particularly high or low.

You can drill on:

- dimensions – by drilling on chart axes

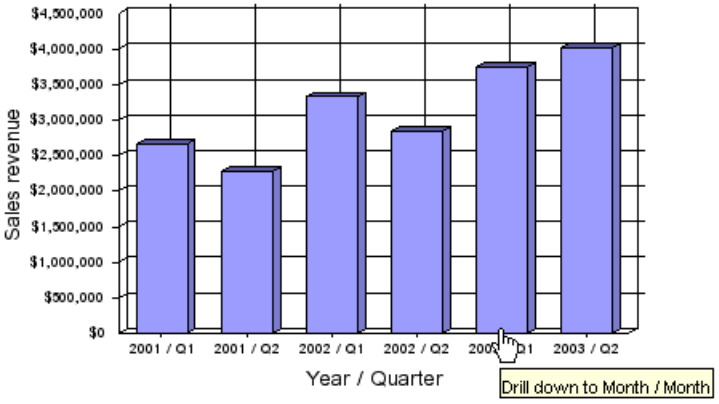
- dimensions – by drilling on the chart legend
- measures – by drilling on the data bars or markers in the body of the chart

You cannot Drill by dimensions on chart axes. However, you can Drill by dimensions on chart legends. For more information, see *Drilling on axis legends* on page 80.

Drilling on dimensions via chart axes

On 2D charts, you can drill on dimensions via the X-Axis. On 3D charts, you can drill on dimensions via the X-Axis and the Z-Axis. Charts can contain one or multiple dimensions on a single axis. When an axis contains multiple dimensions, each possible combination of the dimension values appear on the axis (this is sometimes referred to as a cartesian product).

In the 2D bar chart illustrated below, the X-axis includes the [Year] and [Quarter] dimensions. Each bar on the chart shows the values for one combination of year and quarter; for example, 2001/Q1, 2001/Q2, and so on.



When you drill on an axis value with multiple dimensions, the drilled results are filtered by both dimensions. For example, in the chart illustrated above, if you drill down on 2001/Q1 to the next level of data for [Month], the results displayed on the drilled chart are those for the months in Q1 of 2001.

To drill on a chart axis

1. Verify you are in Drill mode.
2. Place your pointer over the dimension value on which you want to drill.
3. If you want to drill down on the dimension value, click the value. If you want to drill up on the dimension value, right-click the value then select **Drill Up**. If you want to drill down on the dimension value, right-click the value then select **Drill Down**. If you want to drill by the dimension value, right-click the value then select **Drill By**

   Note: Drill by is not available if the axis has multiple dimensions.

Drilling on measures in charts

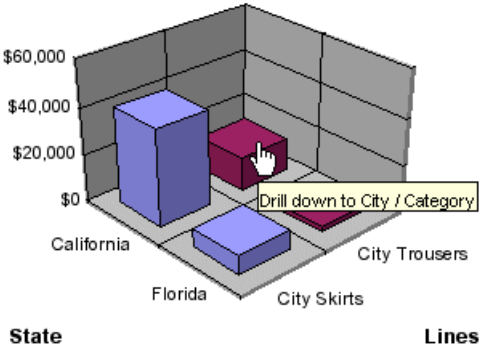
You can drill on the measures displayed on the following types of chart:

- bar charts – by drilling on the bars
- line and radar line charts – by drilling on the data markers
- pie chart – by drilling on the segments

When you drill on measures, Web Intelligence performs the drill action on each dimension displayed on the chart axes. The new measure calculations displayed on the bars or data markers on the drilled chart, correspond to the lower- or higher-level dimensions to which you drilled. The chart axis labels display the names of the drilled dimensions.

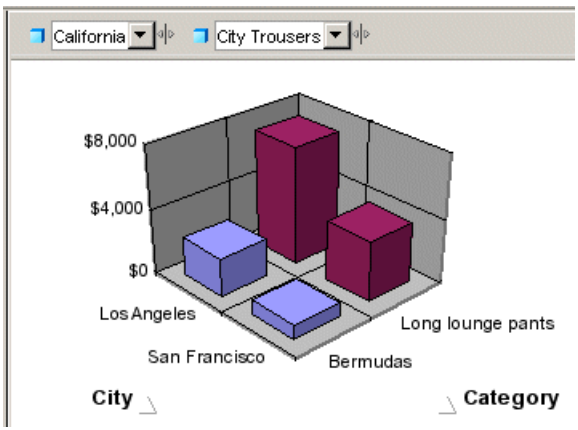
Example: Analyze detailed information for the sales revenue measure on a chart

For example, this 3D bar chart displays values for the [State] dimension on the X-Axis and displays values for the [Lines] dimension on the Z-Axis. This means that the chart bars display values for sales revenue per state per line.



As the example below shows, when you drill down on the bar for “City Trousers” in “California” you also drill down from [State] to [City] on the X-Axis and from [Lines] to [Category] on the Y-Axis.

The drilled chart displays sales revenue per city per category for the “City Trousers” clothing line.



To drill on a measure in a chart

1. Verify you are in Drill mode.
2. Place your pointer on the measure value on which you want to drill.

On charts, each measure is represented by a bar (on bar charts) or by a data marker (on a line charts and radar line charts).

3. If you want to drill down on the measure value, click the bar or data marker. If you want to drill up on the measure value, right-click the bar or data marker, and then click **Drill up**.

Limitations when drilling measures on charts

When you drill on charts that are not bar charts, Web Intelligence may perform the drill action only on certain dimensions instead of performing the drill action on all of the dimensions on the chart axes. When you drill on measures in the following chart types, Web Intelligence only performs the drill action on the values in the axis legend:

- area charts – 2D, 3D, and stacked
- radar and scatter charts – all types

Note: You cannot drill on measures in 3D surface charts.

Drilling on axis legends

You can drill on charts via the chart legend whenever the legend lists the dimensions displayed on the chart. When the chart legend lists the measures displayed on the chart, drilling on the legend is not possible.

Drilling on a legend is useful, if you are working with a pie chart, because the axis labels, which display the names of the dimensions represented by each pie segment, are not often displayed.

Note: You can only Drill by on a chart legend, if there is a single dimension on the axis.

To drill on an axis legend

1. Verify you are in Drill mode.
2. Place your pointer over the value on which you want to drill.
3. To drill down the dimension value, click the color associated with the value. To drill up the dimension value, right-click the color associated with the value, then click **Drill up** ; or click the **Drill Up** icon. To drill by the

dimension value, right-click the color associated with the value, then click **Drill by** .

Using filters when you drill

When you drill on a dimension or measure value in a table or chart, Web Intelligence filters the drilled results by the dimension or measure you drilled on. The filter is applied to all of the results displayed on the drilled report.

Filters appear as list boxes in the Drill toolbar. Each list box contains the values associated with that filter. You select the data displayed in a table or chart by choosing the appropriate values from the list boxes.

Example: Filtering drilled reports by different US states

For example, if you drill down on a table cell displaying “California,” to view results for cities in California, Web Intelligence filters the values in the entire report for California and only displays results for California in the report.

By changing the value of each filter, you can then see data for other values on the drilled dimension. For example, you can select Colorado in the filter on State.

Note: If the drilled report includes dimensions from multiple data providers, a ToolTip appears when you rest your cursor on the value displayed on the filter. The ToolTip displays the name of the query and the dimension for the value.

To change a filter value on the Drill toolbar

1. Verify you are in Drill mode.
2. In the Drill toolbar, click the drop-down arrow relating to the dimension you want to filter.
3. Click the value you want.

To add or remove a drill filter

1. Verify you are in Drill mode.

2. Drag the dimension containing the values around which you want to filter your report and drop it onto the Drill toolbar.

   A list box for the new filter appears on the Drill toolbar. You can select a value from the list of values to filter the results displayed on the drilled table, chart, or report.

3. To remove a drill filter, drag the dimension away from the Drill toolbar.

Saving reports with drill filters

When you save a document with reports in drill mode, Web Intelligence maintains any filters that have been generated during drill. When you open a document saved in drill mode, Web Intelligence displays the Drill toolbar on the drilled reports showing the filters generated during the last drill session.

Note: Documents saved in drill mode take longer to open than documents saved in results mode.

Refreshing data in a drilled report with prompts

Some Web Intelligence reports contain prompts. When you refresh the document, the prompt(s) require(s) you to specify the value(s) you want to retrieve from the database and return to the report(s) in the document. For example, a prompt can require you to specify a year, for which you want to retrieve data. This drilled report shows values for Year 2003 – the year selected for the prompt.

If the drilled report is filtered for Year 2003, and you then refresh the document and select year 2002 to answer the prompt, Web Intelligence retrieves results for 2002 instead of 2003. The drilled report then displays values for 2002.

Drilling with query drill

Query drill defined

You can set Web Intelligence to drill in query drill mode, which behaves differently from the standard drill mode described so far in this chapter. When you activate query drill, Web Intelligence drills by modifying the underlying query (adding and removing dimensions and query filters) in addition to applying drill filters.

Example: Drilling down from month to week

n this example, Month is the lowest dimension currently available in the query from a time hierarchy, and Week is the dimension immediately below it in the hierarchy.

If you drill down on Month = January, three things happen:

- Web Intelligence adds Week to the query scope of analysis.
- Web Intelligence adds a query filter to restrict Month to January.
- Web Intelligence adds a drill filter to restrict Month to January.

If you drill up from Week to Month, the process is reversed:

- Web Intelligence removes Week from the query scope of analysis.
- Web Intelligence removes the query filter.
- Web Intelligence removes the drill filter.

Note: Drill filters are not strictly necessary in query drill mode. Web Intelligence applies them for consistency with standard drill mode. For example, the `DrillFilters` function returns the correct value in query drill mode because Web Intelligence applies drill filters to match the query filters.

When do you use query drill?

You use query drill when your report contains aggregate measures calculated at the database level. It is designed in particular to provide a drill mode adapted to databases such as Oracle 9i OLAP, which contain aggregate functions that Web Intelligence either does not support, or cannot calculate accurately at the report level during a drill session.

The kinds of aggregate functions that are candidates for drilling in query drill mode are: percentages, distinct counts, ranks, standard deviations and variances, running aggregates, lead and lag functions. Because query drill modifies the query at each drill operation, it ensures that these aggregates are recalculated by the server each time you drill.

Query drill is also useful for reducing the amount of data that Web Intelligence must store locally during a drill session. Because query drill reduces the scope of analysis when you drill up, Web Intelligence is able to purge unecessary data.

To activate query drill in Web Intelligence

1. Click **Document** > **Properties** on the main toolbar to display the **"Document Properties"** dialog box.
2. Select **Use query drill**.

Drilling down with query drill

When you drill down, query drill behaves similarly to standard drill at the point where the data moves outside the scope of analysis.

When Web Intelligence filters a drilled dimension in query drill mode it does so by adding a query filter in addition to a drill filter. For example, if you drill on Year=2001, Web Intelligence adds a filter at the query level to restrict the Year dimension to 2001. For this reason, the only value that appears in the drill toolbar for the drilled dimension is the value on which you drilled (in this case 2001). This is different from standard drill mode, in which all values of the dimension are visible in the toolbar. As a result, you cannot change filter values in query drill mode (for example, drill on Year=2001 then switch to Year=2003) as you can in standard drill mode.

Because query drill automatically extends the scope of analysis, you can use it only if your BusinessObjects XI administrator has granted you the the right to drill outside the scope. See your administrator for more details.

Drilling up with query drill

When you drill up, query drill removes dimensions from the query. For example, if you drill up from Month to Quarter, Web Intelligence removes Month from the query. This has two consequences:

- Query drill is incompatible with drill snapshots. For more information, see *Query drill and drill snapshots* on page 85).
- Web Intelligence does not allow you to drill up beyond any dimension that appears as one of the report objects. For example, if your report displays Year, Quarter and Revenue, you cannot drill up from Quarter to Year because this would remove quarter from the list of report objects.

Query drill and drill snapshots

Do not use drill snapshots when working in query drill mode, because query drill means that snapshots cannot be guaranteed to stay the same.

In query drill mode, snapshots change when you drill up beyond a dimension that you included in a snapshot. Because the drill up removes the dimension from the underlying query, it also removes the dimension from the snapshot.

Query drill and other reports based on the same data provider

If your document contains other reports that contain dimensions on which you drill in query drill mode, these reports are affected because the query drill modifies the dimensions they contain.

You can avoid this (at the cost of retrieving duplicate data into Web Intelligence) by creating a new data provider and rebuilding the other report against it. Now when you drill in query drill mode, the other report remains unaffected.

Example: Drilling on a dimension that appears in another report

If you have two reports based on a query that contains Year, Quarter and Sales Revenue, and you use query drill to drill down to Year = 2001 on the first report, Web Intelligence also filters the data for Year in the second report to include 2001 only.

Displaying information in tables

chapter 9

Tables in Web Intelligence

When you create a new document and run the query the first time to display the results, Web Intelligence generates a report that includes all of the results in a vertical table. You can modify how the table is organized, remove or add data, change the table type to display the results differently or insert other tables. You can also insert free standing cells to display results in a single cell.

Table types in Web Intelligence

A Web Intelligence report displays results in a block. You can format the block as a specific type of table.

Vertical table

Vertical tables display header cells at the top of the table and the corresponding data in columns. By default, the header cells display the names of the dimensions, details, and measures included in the table. The body cells display the corresponding values.

Lines	Sales revenue	Margin
Accessories	$9,914,546	$3,809,135
City Skirts	$347,775	$132,302
City Trousers	$284,734	$104,346
Dresses	$2,915,620	$1,173,881
Jackets	$677,307	$286,130
Leather	$187,413	$70,599
Outerwear	$1,183,083	$474,302
Overcoats	$436,258	$185,522
Shirt Waist	$4,018,220	$1,616,218
Sweaters	$2,839,035	$1,000,673
Trousers	$903,320	$327,515

Horizontal table

Horizontal tables display header cells at the left of the table and the corresponding data in rows. By default, the header cells display the names of the dimensions, details, and measures included in the table. The body cells display the corresponding values.

Fiscal Period	FY01	FY02	FY03
Sales revenue	$8,095,814	$13,232,246	$15,059,143
Margin	$3,731,971	$5,187,886	$5,667,084

Crosstab

Crosstabs display values for dimensions across the top axis and on the left axis. The body displays the values of a measure that correspond to the cross-section of the dimensions. For example, this crosstab displays values for [Quarter] across the top axis and displays values for [State] on the left axis. The body displays values that [Sales Revenue] for each quarter in each state.

	Q1	Q2	Q3	Q4
California	$1,899,680	$1,760,148	$1,930,517	$1,889,225
Colorado	$525,682	$500,076	$510,777	$523,740
DC	$766,822	$706,447	$692,258	$796,423
Florida	$515,688	$489,998	$387,810	$485,663
Illinois	$846,408	$850,905	$610,765	$714,890
Massachusetts	$312,896	$291,431	$249,529	$429,850
New York	$1,987,115	$2,028,091	$1,672,581	$1,894,435
Texas	$2,875,569	$2,499,277	$2,146,303	$2,596,516

You can include multiple dimensions in crosstabs. For example, this crosstab displays two dimensions. The values for the [Sales Revenue] measure are values each state by quarter for each line.

	Q1 City Skirts	Q1 City Trousers	Q2 City Skirts	Q2 City Trousers	Q3 City Skirts	Q3 City Trousers	Q4 City Skirts	Q4 City Trousers
California	$7,796	$8,496	$9,075	$1,248	$24,377	$11,924	$33,685	$26,517
Colorado	$726	$2,270	$2,375	$857	$6,421	$2,381	$8,015	$7,468
DC	$2,568	$4,026	$3,564	$1,121	$9,788	$5,338	$8,326	$10,448
Florida	$1,765	$1,737	$2,735		$4,927	$2,511	$7,377	$9,563
Illinois	$588	$2,139	$2,822	$459	$5,552	$5,305	$7,748	$12,987
Massachusetts	$1,194	$532	$2,373		$5,752	$-185	$2,134	$7,565
New York	$10,626	$14,203	$17,241	$1,769	$23,762	$18,689	$28,564	$41,324
Texas	$10,612	$12,604	$22,272	$1,663	$37,119	$20,239	$35,898	$49,539

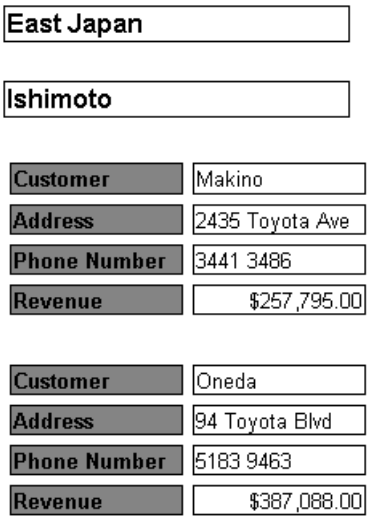
When you create crosstabs that include a dimension(s) in the body, the body cell values are calculated according to a multi-dimensional data model. The values displayed in the body are calculated according to all of the coordinates on the table axes, whether or not there is a row for the specific coordinate in the SQL result.

	California	Colorado	DC
2001	Colorado Springs	Colorado Springs	Colorado Springs
2001	Los Angeles	Los Angeles	Los Angeles
2001	San Francisco	San Francisco	San Francisco
2001	Washington	Washington	Washington
2002	Colorado Springs	Colorado Springs	Colorado Springs
2002	Los Angeles	Los Angeles	Los Angeles
2002	San Francisco	San Francisco	San Francisco
2002	Washington	Washington	Washington
2003	Colorado Springs	Colorado Springs	Colorado Springs
2003	Los Angeles	Los Angeles	Los Angeles
2003	San Francisco	San Francisco	San Francisco
2003	Washington	Washington	Washington

Forms

Forms are useful in your report if you want to display detailed information per customer, product, or partner. For example, a form is a useful way of displaying individual customer records with information such as the customer account, name, address, and so on.

Forms are also useful for formatting address labels for envelopes.



Creating, editing and removing tables

To insert a table in Web Intelligence

1. To display the **Document Properties** pane, click the Show left pane arrow at the top left of the report.
2. Select **Chart and Table Types** from the drop down list in the **Document Properties** pane.

   The Left panel now displays all the types of tables, charts and free standing cells that you can add to the report.
3. Select the table type that you want to add to the report in the Left panel and drag the table onto the report.
4. Right-click the table in the report, select **Insert** from the menu, then select **New column** or **New row** to add rows or columns to the table.
5. Select **Available Objects** from the drop-down list at the top of the left panel.
6. Drag the object that you want to associate with a column to the column in the report table.

   The column is populated with the data from the report object.

7. Continue dragging objects to table columns until you have associated objects with all columns.

To name a table in Web Intelligence

1. Select the table, right click, select **Format** from the menu and then select **Table** from the sub menu.
2. Select the **General** tab on the **"Format Table"** dialog box.
3. Type the table name in the **Name** box.

To change the table type using Turn To in Web Intelligence

1. Right-click inside the table and select **Turn table to** from the menu.
   The **"Turn To"** dialog box appears.
2. Make sure that **Tables** is selected in the left pane.
3. Select the type of table to which you want to change the current table in the **Available Formats** area on the right.
4. Click **OK**.
   Web Intelligence changes the table to the type you selected.

To change the table type using drag and drop in Web Intelligence

1. Make sure that the **Document Properties** pane is displayed to the left of the selected report. To display the Document Properties pane, click the Show left pane arrow at the top left of the report.
2. Select **Chart and Table Types** from the drop down list at the top of the Left panel.
3. Select the table type to which you want to change the existing table and drag it over the existing table.

To move columns in a table in Web Intelligence

1. Right-click in the table, select **Format** from the menu, then select **Table**.
   The **"Format Table"** dialog box appears.
2. Select the **Pivot** tab.
3. Select objects in the **Available Objects** area, and click **>>** to add them to the table.
4. Select objects in the **Column(s)** area and click **<<** to remove them from the table.
5. Drag objects in the **Column(s)** area to set the order of columns in the table.
6. Click **OK**.

To remove a column from a table in Web Intelligence

1. Select the column and right-click.
2. Select **Remove** from the menu, then select **Column**.

To remove a row from a table in Web Intelligence

1. Select the row and right-click.
2. Select **Remove** from the menu, then select **Row**.

To add a column to a table in Web Intelligence

1. Select a column in the table and right-click.
2. Select **Insert** from the menu, select **New Column**, then select **Left** or **Right**, depending on whether you want to insert the column to the left or right of the selected column.

To add a row to a table in Web Intelligence

1. Select a row in the table and right-click.

2. Select **Insert** from the menu, select **New Row**, then select **Above** or **Below**, depending on whether you want to insert the row above or below the selected row.

To move columns in a crosstab in Web Intelligence

1. Select the crosstab.
2. Right-click and select **Swap Axis** from the menu.

   Web Intelligence swaps the rows and columns of the crosstab.

To add objects to a table in Web Intelligence

1. Make sure that the **Document Properties** pane is displayed to the left of the selected report. To display the **Document Properties** pane, click the **Show left pane** arrow at the top left of the report.
2. Select **Available Objects** from the drop down list at the top of the Left panel.
3. Select the object you want to add and drag it over to the table so that a red bar appears where you want to place the object.
4. Release the object.

   Web Intelligence adds the object to the table.

To clear table or cell contents in Web Intelligence

1. Select the cell or column within a table.
2. Display the Formula bar by selecting **View** from the menu, then selecting **Toolbars**, then **Formula**.
3. Delete the cell formula in the Formula bar.

   Web Intelligence removes the data from the cell(s).

To remove a table in Web Intelligence

1. Select the table.
2. Right-click and select **Remove** from the menu, then select **Table**.

Formatting tables and table cells

To copy formatting using the Format Painter

You can quickly apply the formatting from a report, table or cell to other reports, tables or cells using the Format Painter.

The formatting options applied depend on the objects you choose as the source and target. In general, only properties that affect the visual formatting (for example font style, background color) are applied. Properties that affect the display of data (for example, table properties such as "Avoid duplicate row aggregation" property) are not applied.

1. Select the report, table or cell whose formatting you want to apply.
2. Click the Format Painter to apply the formatting once, or double-click to apply the formatting multiple times.

   The Format Painter is the button furthest to the right on the **Formatting** toolbar.
3. Click the report, table or cell to which you want to apply the formatting.

   Web Intelligence applies the formatting to the report, table or cell you selected. If you single-clicked the Format Painter, it is deactivated.

   If you double-clicked the Format Painter, it remains activated.
4. If you double-clicked, click the Format Painter again or press Esc to cancel the formatting operation. (You can do this before applying the formatting for the first time if you decide to abandon the formatting operation.)

To set cell height and width in Web Intelligence

1. Select the cell, right click, select **Format** from the menu and then select **Cell** from the sub menu.
2. Select the **General** tab in the **"Format Cells"** dialog box.
3. Check the **Specify width** check box and enter the width of the cell, or check **Autofit width** to set the width of the cell in relation to the cell content.

4. Check the **Specify height** check box and enter the height of the cell, or check **Autofit height** to set the height of the cell relative to the cell content.

   Note: Some Web Intelligence functions are incompatible with AutoFit cells. If you place any of these functions in an AutoFit cell, Web Intelligence returns the #RECURSIVE error message as the function output.

To format text in table cells in Web Intelligence

1. Select the cell, right-click, select **Format** from the menu then select **Cell** from the sub menu.
2. Select the **Font** tab in the **Format Cells** dialog box.
3. Use the controls on the **Font** tab to format the text.

To align cell values in Web Intelligence

1. Select the cell, right click, select **Format** from the menu and then select **Cell** from the sub menu.
2. Select the **Alignment** tab in the **"Format Cells"** dialog box.
3. Use the radio buttons to set the horizontal format (left -justified, centered or right-justified) and the vertical format (top, middle or bottom).
4. To set the vertical and horizontal padding (the distance of the cell content from the left and top cell borders) enter the padding distances in the **Vertical** and **Horizontal** boxes.

To merge cells in Web Intelligence

1. Multi-select the cells or columns you want to merge by holding down Ctrl and selecting each cell/column.
2. Select **Merge cells**.

To format numbers and dates in Web Intelligence

1. Select the cell containing the number or date you want to format.

2. Right-click, select **Format** from the menu then select **Cell** from the sub menu.

   The **"Format Cells"** dialog box appears.

3. Select the format from the list of formats and click **OK**.

   f the cell contains a number, the list of formats contains number formats. If the cell contains a date, the list of formats contains date formats.

To align a table or cell on a report page in Web Intelligence

1. Select the table, right-click, select **Format** from the menu then select **Table** or **Cell** from the sub menu.
2. Select the **Layout** tab in the **"Format Table"** dialog box or the **Alignment** tab in the **"Format Cell"** dialog box.
3. Select the alignment options.
   - For a cell, you use the **Alignment** section of the dialog box to select the horizontal and vertical alignment of the cell text.
   - For a table, you use the **Within the Report** section of the dialog box to select either the absolute or relative position of the left and top of the table. If you select a relative option you also select the report object relative to which the table is positioned.

To format table borders in Web Intelligence

1. Select the cell, right-click, select **Format** from the menu and then select **Cell** from the sub menu.
2. Select the **Border** tab in the **"Format Cells"** dialog box.
3. To set the style for all the borders of the selected cell, select the style from the **Settings applied to all borders** list.
4. To set the style for each border of the selected cell individually, select the styles from the four lists in **Settings per border**.
5. To remove borders, select **None** in the lists.
6. Click the down arrow beside each drop down list to display the color editor to choose the border color.

7. Select the color in the Color Editor or click **More colors...** to display the Custom Color Picker.
8. Select the color in the Custom Color Picker or enter the red, green and blue values of the color.

To set the cell background color in Web Intelligence

1. Select the cell, right-click, select **Format** from the menu and then select **Cell** from the sub menu.
2. Select the **Font** tab in the **"Format Cells"** dialog box
3. Click the arrow next to **Background** to display the color editor.
4. Select the color in the color editor or select **More colors...** to display the Custom Color Picker. (To remove the color, select **Default** in the color editor.)
5. Select the color in the Custom Color Picker or enter the red, green and blue values of the color.

To insert an image in a table in Web Intelligence

1. Select the table, right-click, select **Format** from the menu then select **Table** from the sub menu.
2. Select the **Appearance** tab in the **"Format Table"** dialog box.
3. Click **Image URL**.
4. Type the file name in the **Image from URL** box (Web Intelligence inserts the HTML tag `boimg://` before the file name and links to the image file on a corporate web server), or type the web server URL followed by the file name of the image file (the URL and file name must not include spaces).
5. To specify an image on the file system, select **Image from file**, then click **Add** and browse to the image file.
6. Click the arrow to the right of the **Display** drop-down list box, and then select how you want the image to be displayed

   If you selected **Normal** as the image display format, you can specify how you want the image to be vertically and horizontally aligned by clicking the arrows in the list boxes next to Position and selecting the appropriate vertical and horizontal position.

To display a skin in a table in Web Intelligence

1. Select the table, right-click, select **Format** from the menu and then select **Table** from the sub menu.
2. Select the **Appearance** tab in the **Format Table** dialog box.
3. Click **Skin** then select the skin from the list of server skins in the drop-down list next to the **Skin** radio button.
4. Type the skin spacing and padding in the **Spacing** and **Padding** boxes.

To layer tables and cells

Layering determines how tables and cells appear when they occupy the same space in a report. An object further forward in the layering order appears over an object further backward in the layering order.

1. Select the table or cell whose layer you want to set.
2. Right-click, click **Order** and click the layering option.

Option	Description
Bring to front	Make the table or cell the first object in the layering order.
Send to back	Make the table or cell the last object in the layering order.
Bring forward	Bring the table or cell one layer forward in the layering order.
Send backward	Send the table or cell one layer backward in the layering order.

Determining how tables display data

Showing or hiding empty tables, rows or columns

Sometimes tables or specific rows and columns display no values. For example, if a sales of a specific product are discontinued, table rows or columns that normally show results for that product appear empty. By default, Web Intelligence displays such empty rows, columns, or tables. You can choose to display or hide empty tables, rows or columns.

To show or hide empty tables, rows or columns in Web Intelligence

1. Select the cell, right-click, select **Format** from the menu and then select **Table** from the sub menu.
2. Select the **General** tab on the **"Format Table"** dialog box.
3. To hide empty rows, uncheck **Show empty rows**.
4. To hide empty columns, uncheck **Show empty columns**.
5. To hide the entire table if it is empty, uncheck **Show table when empty**.

Aggregating duplicate rows

When rows contain duplicate data, Web Intelligence aggregates measure values by default.

To avoid duplicate row aggregation in Web Intelligence

1. Select the cell, right click, select **Format** from the menu and then select **Table** from the sub menu.
2. Select the **General** tab on the **"Format Table"** dialog box.
3. Uncheck **Avoid duplicate row aggregation**.

To avoid page breaks in tables in Web Intelligence

1. Select the table, right-click, select **Format** from the menu then select **Table** from the sub menu.
2. Select the **Layout Properties** tab in the **"Format Table"** dialog box
3. Check **Avoid page breaks in a block** .

To view, activate and deactivate alerters in Web Intelligence

You can activate alerters created in the Java Report Panel to format data in a Web Intelligence table.

1. Select a column or columns in the table.
2. Click **Alerters** on the Report toolbar.

   The **"Alerters"** dialog box appears.
3. Check the box next to an alerter to activate it, or uncheck the box to deactivate the alerter.

   The table appearance changes according to which alerters are activated.

To filter data in a table

1. Select the object you want to filter in the table.
2. Click the arrow to the right of **Apply Filter** on the **Report** toolbar and select **Add Filter** from the menu to display the **"Filter"** dialog box.
3. Use the **"Filter"** dialog box to create the filter.

Using sections to group data

chapter 10

Grouping information with sections

Sections allow you to split report information into smaller, more comprehensible parts.

Example: Grouping quarterly revenue results into sections on a report

You are the regional sales manager in Texas. You receive a report showing 2003 annual revenue for stores in your region, broken down by cities and quarters.

City	Quarter	Sales revenue
Austin	Q1	314430
Austin	Q2	273608
Austin	Q3	294798
Austin	Q4	252644
Dallas	Q1	215874
Dallas	Q2	194689
Dallas	Q3	204066
Dallas	Q4	188791
Houston	Q1	572177
Houston	Q2	619924
Houston	Q3	533765
Houston	Q4	520332

To make a comparison of the results for each city per quarter, you set [Quarter] as a section value. The report is broken up into four separate sections by quarter.

Q1

City	Sales revenue
Austin	314430
Dallas	215874
Houston	572177

Q2

City	Sales revenue
Austin	273608
Dallas	194689
Houston	619924

Q3

City	Sales revenue
Austin	294798
Dallas	204066
Houston	533765

Q4

City	Sales revenue
Austin	252644
Dallas	188791

City	Sales revenue
Houston	520332

You can create a single section or include multiple sections with subsections in a report. You can also remove and reposition sections within a report.

You can create a section from one of two sources:

- on a dimension already displayed on a table or chart
- on a dimension included in the document but not displayed on a table or chart

You cannot create a section with a measure object.

Creating and removing sections and subsections

To create a section from a table cell in Web Intelligence

1. With a Web Intelligence document open, right-click the table cell you want to make into a section.
2. Click **Set as Section**.

   Web Intelligence removes the selected cell from the table and creates the new section. The section cell at the top of each section displays one of the values for the object on which the section is based. For example, if you create a section by selecting a table cell displaying “2001” which is a value for the [Year] dimension, then each section cell displays a value for year, such as “2001,” “2002,” “2003,” and so on.

To add a section based on object available in the document in Web Intelligences

1. With a report in a Web Intelligence document open, verify that the **Document Properties** pane is displayed to the left of the selected report. (To display the **Document Properties** pane, click the Show left pane arrow at the top left of the report.)
2. Click the arrow to the right of the drop-down list box, then select **Available Objects**.
3. Select the object, on which you want to base a section, and then drag-and-drop the selected object onto a blank area of the report above the tables and charts you want to include inside the section.

   Web Intelligence creates the new section and inserts each value on the dimension that you selected for the section, into the section cell.

Creating subsections in Web Intelligence

You can create a report with multiple sections. You create multiple sections in the same way you create a section:

- by selecting a cell on a table and selecting Set as section from the contextual menu
- by selecting a dimension object listed on the Available Objects pane, and then dragging and dropping the dimension below an existing section cell

Related Topics

- *To add a section based on object available in the document in Web Intelligences* on page 107
- *To create a section from a table cell in Web Intelligence* on page 106

To include hyperlinks to sections in Web Intelligence

1. With a Web Intelligence document open, right-click an empty area of the section that you want to format. (Do not click the section cell. If you click the section cell, the formatting options available to you correspond to options you can use to format the individual cell, not the entire section.)

The contextual menu appears.

2. Select **Format** > **Section**.
   The **"Format Section"** dialog box appears.
3. Click the **General** tab.
4. Select **Include section in the Navigation Map**.
5. Click **OK**.
   Web Intelligence creates hyperlinks to each of the section values and includes the hyperlinks in the **Navigation Map** pane.

To remove a section in Web Intelligence

1. Right-click a section you want to remove. Make sure you select the section, not the section cell.
   The contextual menu appears.
2. Select **Remove Section**.
   Web Intelligence removes the section and regroups the report data accordingly.

Formatting sections

To select a background color for a section in Web Intelligence

1. With a Web Intelligence document open, right-click an empty area of the section that you want to format. (Do not click the section cell. If you click the section cell, the formatting options available to you correspond to options you can use to format the individual cell, not the entire section.)
2. The contextual menu appears.
3. Select **Format** > **Section** .
   The **"Format Section"** dialog box appears.
4. Click the **Appearance** tab.

5. Click the arrow next to the color wash button, and then either select a predefined color or click **More colors** to define a custom color, and then click **OK**.
6. Click **OK**.

To display an image on a section background in Web Intelligence

1. With a Web Intelligence document open, right-click an empty area of the section that you want to format. (Do not click the section cell. If you click the section cell, the formatting options available to you correspond to options you can use to format the individual cell, not the entire section.)

   The contextual menu appears.
2. Select **Format** > **Section** .

   The **"Format Section"** dialog box appears.
3. Click the **Appearance** tab.
4. In the **Pattern** section, select **Image (URL)**
5. In the **Image (URL)** text box, type the file name or URL for the image file.

   The size of the image is defined when the image is created. You cannot modify the size of the image using Web Intelligence.
6. Click the arrow to the right of the **Display** drop-down list box, and then select how you want the image to be displayed.
7. If you selected **Normal** as the image display format, you can specify how you want the image to be vertically and horizontally aligned by clicking the arrows in the list boxes next to **Position** and selecting the appropriate vertical and horizontal position.
8. Click **OK**.

   Web Intelligence applies the image you selected to the section background.

Specifying an image URL in Web Intelligence

There are two ways to specify an image URL in Web Intelligence:

- If the image file has been installed by your administrator in the images directory on the BusinessObjects Enterprise server (located at `<INSTALL`

DIR>\Images), type boimg:// followed by the file name (for example, boimg:// efashion_logo.gif).

- If the image file is located on another web server, type the URL (for example, http://www.internal.businesscompany.com/images/company_logo.gif).

Image display options in Web Intelligence

Option	Description
Normal	Displays the image once at the top left of the report, section, table, or cell.
Stretch (PDF only)	Stretches the image over the entire report area. **Note:** this option is only applied when you view or save the report as a PDF file.
Tile	Repeats the image vertically and horizontally.
Horizontal tile	Repeat the image horizontally across.
Vertical tile	Repeat the image vertically downward.

Note: The size of the image is defined when the image is created. You cannot modify the size of the image using Web Intelligence.

To display a skin on a section background in Web Intelligence

1. With a Web Intelligence document open, right-click an empty area of the section that you want to format. (Do not click the section cell. If you click the section cell, the formatting options available to you correspond to options you can use to format the individual cell, not the entire section.)

   The contextual menu appears.

2. Select **Format** > **Section** .
   The **"Format Section"** dialog box appears.
3. Click the **Appearance** tab.
4. In the **Pattern** section, select **Skin**
   The list of available skins appears in the drop-down list box to the right.
5. Select the skin you want.
6. Click **OK**.

To set the page layout for a section in Web Intelligence

1. Right-click an empty area of the section that you want to format. (Do not click the section cell. If you click the section cell, the formatting options available to you correspond to options you can use to format the individual cell, not the entire section.)
   The contextual menu appears
2. Select **Format** > **Section**.
   The **"Format Section"** dialog box appears.
3. Click the **Page Layout** tab.
4. To insert a page break so that the section appears at the top of a new page, select **Start on a new page**.
5. To prevent page breaks from occurring on the section, wherever possible, select **Avoid page breaks in a block**.
6. In the **Position** section, specify where you want to position the left edge and the top edge of the section in relation to the left edge and top edge of the report page.
7. Click **OK**.

Displaying data in free-standing cells

chapter 11

Free-standing cells defined

Free-standing cells are single cells that stand alone in a report. You can use free-standing cells to display information that adds meaning to your report, such as:

- text comments – type messages or questions or to add titles
- images – display logos, icons, or photographs on reports
- formulas or calculations – add custom formulas or calculations
- the last refresh date – display he date when the document results were refreshed with the most recent data from the database
- the DrillFilter function – display the names of the objects by which the data on a drilled report is filtered
- page numbers – display the page number of each report page

To insert a free-standing cell in Web Intelligence

1. Make sure that the **Document Properties** pane is displayed to the left of the selected report. To display the **Document Properties** pane, click the **Show left pane** arrow at the top left of the report.
2. Select **Chart and Table Types** from the drop down list.

   The Left panel now displays all the types of tables, charts and free standing cells that you can add to the report.
3. Open the free standing Cells item in the report template hierarchy to display the types of free standing cell you can add.
4. Drag the type of free standing cell you want to add to the report.

   If you choose Blank Cell, the cell remains blank. If you choose any other type of cell, the cell is populated based on the type of information that the cell displays. For example, if you choose Last Refresh Date, the cell contains the formula LastExecutionDate() which populates it with the date the report was last refreshed.

To remove a free-standing cell in Web Intelligence

1. Select the cell.
2. Right-click and select **Remove Cell** from the menu.

   You can only remove free standing cells. You cannot remove single cells from a table.

Displaying data in charts

chapter 12

Creating charts

You can include one or multiple charts on the reports in a Web Intelligence document. You can create a chart when you build or new document or insert charts into an existing document.

If you are building a new document, you need to define the data definition of the document by building a query before you select a chart template.

Once you have defined the query you go to Report View to define the chart(s) on report(s).

To create a chart, you follow three steps:

- select a chart template
- allocate dimensions and measures to the chart axes
- view the results displayed on the chart

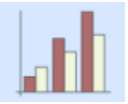
If you want to create a chart that displays the same data as a table on a report, you can copy the table first and then turn the duplicate table into a chart using the **"Turn To"** dialog box.

Chart types in Web Intelligence

A Web Intelligence report displays results in a block. You can format the block as a specific type of chart.

Bar charts

Bar charts display data in bar form, either vertically or horizontally. Bar charts are useful if you want to compare similar groups of data; for example one time period to another. There are five types of bar charts: grouped, bar and line, stacked, percent, and 3D.



2D bar charts include the optional Z-Axis. Including data on the Z-Axis enables you to show an additional break down of the results displayed on the chart bars.

3D bar charts do not include an axis legend. You can clearly see what information is displayed on the chart bars by looking at the axis labels.

Line charts

Line charts connect specific data values with lines, either horizontally or vertically. Line charts are useful if you want to show trends or changes in data over time. There are five types of line charts: mixed, stacked, percent, 3D, and 3D surface.

Area charts

Area charts are line charts in which the area between the lines and axis are filled in. Area charts are useful if you want to emphasize the size of the total data in a report, as opposed to the changes in the data. You may not want to use an area chart if you have a sharp contrast between specific data points. Use a line chart instead.

You can use more than one measure object on the Y-axis as long as the measures are of the same type and scale; for example, Number of Guests, and Future Guests. There are five types of area charts: absolute, stacked, percent, 3D area, and 3D surface.

Pie charts

Pie charts display data as segments of a whole. Pie charts are useful if you want to show how each part of your report data contributes to the total.

Pie charts have a single axis displayed on the body of the pie. This is the Y-Axis. Each segment of the pie chart displays a value for the measure on the Y-Axis. The pie chart legend indicates the dimension on the X-Axis.

You can only include one measure object in a pie chart. If you have several measures in your report, you should choose another chart type. There are four types of pie charts: pie, 3D pie, ring, 3D ring.

Radar, polar and scatter charts

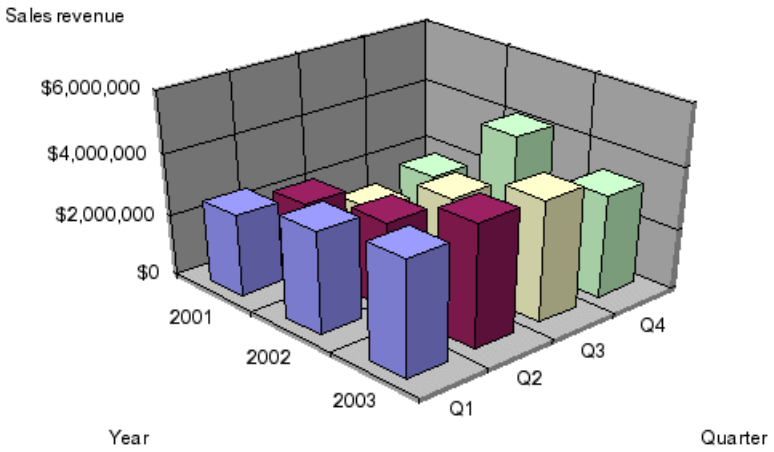
In radar charts, the X- and Y-axis connect at the chart's center. Radar charts are useful if you want to look at several different factors related to one item. For example, you could use a radar chart to display revenue data for different services within a hotel. On one axis, you could display revenue for the rooms. On another you could display revenue for the restaurant, and so on.

Scatter charts are similar to line graphs, except that the data points are plotted without a line connecting them. Scatter charts are useful if you want to make a comparison between specific data points.

There are four types of radar, polar, and scatter charts: radar line, stacked radar, polar, and scatter.

3D charts

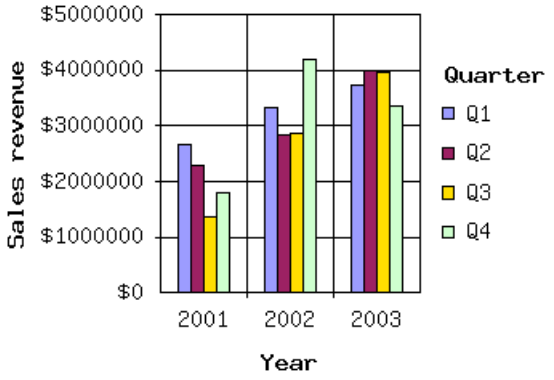
3D charts include three axes: the Y-Axis always displays values for measures (such as sales totals, margins, quantities and so on); the X- and Z-Axis display values for dimensions (that is, key indicators, such as time, geography, service lines, and so on). In the 3d bar chart displayed below, the chart bars display sales revenue per quarter, per year. The [Sales revenue] measure is on the Y-Axis, the [Quarter] dimension is on the X-Axis, and the [Year] dimension is on the Z-Axis



To see how this data is displayed in a 2D bar chart, see *2D charts* on page 121.

2D charts

The 2D bar chart below includes an optional Z-Axis with the values for quarter. Including data on the Z-Axis enables you to show an additional break down of the results displayed on the chart bars. The [Sales revenue] measure is on the Y-Axis, the [Year] dimension is on the X-Axis, and the [Quarter] dimension is on the Z-Axis. Notice that because the Z-Axis cannot be represented graphically on a 2D chart, the legend provides the information for the Z-Axis values.



To see the same data displayed in a 3D bar chart, see *3D charts* on page 121.

Adding, copying and removing charts

To insert a blank chart and allocate data to the axes

1. Click the **Show Left Pane** arrow at the top left of the report to display the **Document Properties** pane.
2. Click the arrow to the right of the drop-down list box, then select **Chart and Table Types**.
3. Select the chart type you want to add to the report, and then drag it onto a blank area of the report.

   The **Format Chart** dialog box appears.
4. Verify the **Pivot** tab is selected.
5. Select objects from the **Available Objects** list and drop them onto the Y-Axis, X-Axis, and Z-Axis panes as appropriate.

   You can only place measure objects on the Y-Axis.
6. To view the data on the chart now, click **OK**, or click **Apply** and then select the **General**, **Appearance**, or **Layout Properties** tab(s) to personalize how the chart is formatted.

To duplicate a chart

1. Select the chart you want to duplicate.
2. Click **Duplicate** on the Report toolbar, or click the arrow next to the **Duplicate** button and then select where you want the duplicate chart to be positioned in relation to the original chart.

   Web Intelligence inserts the duplicate chart.

To turn a table into a chart

1. Right-click the table you want to turn into a chart.
2. Click **Turn table to...**

   The **"Turn To"** dialog box appears.
3. Select the chart type you want to create in the left pane.
4. Click the appropriate format, and then click **OK**.

   The different formats available for the selected chart type appear on the right.

To remove a chart from a report

1. Right-click the chart you want to remove.

   The contextual menu appears.
2. Select **Remove Chart**.

   Web Intelligence removes the selected chart from the report.

To name a chart

1. Right-click the chart and select **Format** > **Chart**.

   The **Format Chart** dialog box appears.
2. Click the **General** tab.
3. In the **Name** text box, type the name you want to assign to the chart.

Positioning charts

To position a chart on the report page

1. Right-click the chart and select **Format** > **Chart**.
   The **Format Chart** dialog box appears.
2. Click the **Page Layout** tab.
3. In the **Position** section, specify where you want to position the left edge and the top edge of the chart in relation to left edge and top edge of the report page.
4. Click **OK**.

Changing the chart type

To change the chart type using TurnTo

1. Right-click the chart you want to modify.
2. Click **Turn chart to...**
   The **"Turn To"** dialog box appears
3. Select the chart type you want in the left pane.
4. Click the appropriate format on the right, and then click OK.
   Web Intelligence modifies the chart according to the format you selected and re-allocates the data to different chart axes, if necessary.

To change the chart type using drag and drop

1. To display the **Document Properties** pane, click the Show Left Pane arrow at the top left of the report.
2. Click the arrow to the right of the drop-down list box, then select **Chart and Table Types**.
3. Select the chart format you want, and then drag it onto the chart you want to modify.

Web Intelligence transforms the chart on the report to the new chart type you selected and re-allocates the data to different chart axes, if necessary.

Formatting charts

To select a 2D or 3D look for a chart

1. Right-click the chart and select **Format** > **Chart**.
   The **Format Chart** dialog box appears.
2. Click the **General** tab.
3. If you want to apply a 3D look to the chart, select **3D look**; or, if you want to apply a 2D look to the chart, verify that the **3D look** option is not selected.

To show, format or hide axis labels

1. Right-click the chart and select **Format** > **Chart**.
   The **Format Chart** dialog box appears.
2. Click the **General** tab.
3. Select or unselect the **Show X Axis**, **Show Y Axis**, and **Show Z Axis** check boxes, as appropriate.
4. Use the options in the formatting toolbar on the **Appearance** tab to format the text, cell background, and cell borders of the axis labels.

To show, format or hide the axis grid

1. Right-click the chart and select **Format** > **Chart**.
   The **Format Chart** dialog box appears.
2. Click the **Appearance** tab, and then click **Values** on the appropriate axis on the preview pane on the left.
   The options available for the selected axis appear.
3. To show or hide the grid on the selected axis, select or unselect **Show grid**.

4. To format the grid, verify that the **Show grid** option is selected, then click the arrow next to the color wash button, and then either select a predefined color or click **More colors...** to define a custom color, and then click **OK**.

To select the data color

1. Right click the chart and select **Format** > **Chart** .
   The **"Format Chart"** dialog box appears.
2. Click the **Appearance** tab.
3. n the **Data: Primary Color** section, click the arrow next to the color wash button, and then either select a predefined color or click **More colors...** to define a custom color, and then click **OK**.

To show values on pie charts as percentages

1. Right click the chart and select **Format** > **Chart** .
   The **"Format Chart"** dialog box appears.
2. Click the **Appearance** tab.
3. In the **Data** section, select **Show values as percentages**.

To select the style and color of a chart border

1. Right click the chart and select **Format** > **Chart** .
   The **"Format Chart"** dialog box appears.
2. Click the **General** tab.
3. n the **Chart borders** section, click the arrow next to the drop-down list box, and then select the style you want for the border
4. Click the arrow next to the color wash button, and then either select a predefined color or click **More colors...** to define a custom color, and then click **OK**.

To remove the border of a chart

1. Right click the chart and select **Format** > **Chart** .

The **"Format Chart"** dialog box appears.

2. Click the **General** tab.
3. In the **Chart borders** section, click the arrow next to the drop-down list box, and then select **None**.
4. Click **OK**.

To select the background color of a chart

1. Right click the chart and select **Format** > **Chart** .
   The **"Format Chart"** dialog box appears.
2. Click the **General** tab.
3. Click the arrow next to the color wash button, and then either select a predefined color or click **More colors...** to define a custom color, and then click **OK**.

To show or hide chart walls and floors

1. Right click the chart and select **Format** > **Chart** .
   The **"Format Chart"** dialog box appears.
2. Click the **Appearance** tab.
3. Click the chart body area on the preview pane.
   The options to show the chart floor and walls appear.

   Note: You can show both walls and floors on 3D charts. You can only show floors on 2D charts with a 3D look.
4. To show or hide the floor and/or walls on the chart, select or unselect **Show floor**, **Show left wall**, and/or **Show right wall**, as appropriate.
5. Click **OK**.

To insert and format a chart title

1. Right-click the chart and select **Format** > **Chart**.
   The **Format Chart** dialog box appears.
2. On the **General** tab, select **Show Chart Title**.

3. Click the **Appearance** tab.
4. Click **Chart Title** on the preview pane on the left.
5. In the **Chart Title** pane on the right, type the title you want to give to the chart.
6. Use the options in the formatting toolbar on the **Appearance** tab to format the text, cell background, and cell borders of the chart title.
7. Click **OK**.

To set the page layout of charts

1. Right-click the chart and select **Format** > **Chart**.
   The **Format Chart** dialog box appears.
2. Click the **Page Layout** tab.
3. Select the page layout options.
4. Click **OK**.

To show, hide, position and format chart legends

1. Right-click the chart and select **Format** > **Chart**.
   The **Format Chart** dialog box appears.
2. Click the **General** tab.
3. To display a legend, click **Show legend**, and then click the arrow next to the drop-down list box and select where you want to position the legend (**Left**, **Right**, or **Bottom**) in relation to the chart.
4. To hide the legend, unselect **Show legend**.
5. To format the legend, click the **Appearance** tab, then click **Legend** on the chart preview pane, then format the legend using the controls on the tab.

Displaying and formatting chart data

To show or hide data values

1. Right click the chart and select **Format** > **Chart** .
   The **"Format Chart"** dialog box appears.
2. Click the **Appearance** tab.
3. To display or hide the figures for each result on the chart bars, lines, markers, or segments, select or unselect **Show data values**.

To define the text and number format for axis values

1. Right-click the chart and select **Format** > **Chart**.
   The **Format Chart** dialog box appears.
2. Click the **Appearance** tab, and then click **Values** on the appropriate axis on the preview pane on the left.
   The options available for the selected axis appear.
3. Use the options in the formatting toolbar on the **Appearance** tab to format the text, cell background, and cell borders of the chart title.
4. If you want to change the number format applied to numerical values or dates, click the arrow next to the **Number** drop-down list box, and then select the appropriate format.

To set the frequency of values on an axis

1. Right-click the chart and select **Format** > **Chart**.
   The **Format Chart** dialog box appears.
2. Click the **Appearance** tab, and then click **Values** on the appropriate axis on the preview pane on the left.
   The options available for the selected axis appear.
3. If you want Web Intelligence to display values along the axis at an automatic frequency, select **Auto axis value frequency**.
4. If you want to specify the frequency at which the values appear, deselect **Auto axis value frequency**, and then type the frequency you want

If you type “2” every two values appear on the axis; if you specify “3” every three values appear on the axis, and so on.

To define minimum and maximum values on the Y axis

1. Right-click the chart and select **Format** > **Chart**.
   The **Format Chart** dialog box appears.
2. Click the **Appearance** tab, and then click **Values** on the appropriate axis on the preview pane on the left.
   The options available for the selected axis appear.
3. To specify the minimum value, select **Min. value**, and then type minimum value you want, in the text box.
4. To specify the maximum value, select **Max. value**, and then type maximum value you want, in the text box.

To move, add or remove data on charts

1. Right-click the chart you want to modify.
2. Select **Format** > **Chart** .
   The **"Format Chart"** dialog box appears.
3. Click the **Pivot** tab.
4. To add objects to the chart, select objects from the **Available Objects** list and drop them onto the **Y-Axis**, **X-Axis**, and **Z-Axis** panes as appropriate.
5. To move objects from one axis to another, select the object in the appropriate axis pane, and then drag the object to the pane for the axis where you want to move it.
6. To remove objects from the chart, select the object in the appropriate axis pane, and then drop the object onto the **Available Objects** list.
7. Click OK.
   Web Intelligence displays the chart with the data allocated to the chart axes as you specified.

To swap data on 3D chart axes

- Right-click the chart and select **Swap axes** on the menu.

  The data on the X-Axis is moved to the Z-Axis and the data on the Z-Axis is moved to the X-Axis.

Linear and logarithmic axes scales

By default, Web Intelligence displays the Y-axis on charts as a linear scale. You can set the axis to a logarithmic scale. Logarithmic scales allow you to examine values that span many orders of magnitude without losing information on the smaller scales.

In a linear scale, the axis markers are evenly spaced. Linear scales are based on addition. Consider, for example, the linear sequence: 1, 3, 5, 7, 9

To get the next number in the sequence, you add 2 to the previous number.

Logarithmic scales are based on multiplication rather than addition. In a logarithmic scale, the steps increase or decrease in size. Logarithmic scales are based on multiplication (or division). Consider, for example, the logarithmic sequence: 2, 4, 8, 16, 32

To get the next number in the sequence, you multiply the previous number by 2. We can say that this sequence represents ``base 2."

Consider the following sequence: 1, 10, 100, 1000, 10000

This sequence represents ``base 10," because you get the next term in the sequence by multiplying the previous term by 10.

To display the Y Axis logarithmically in Web Intelligence

1. Right click the chart and select **Format** > **Chart** .

   The **"Format Chart"** dialog box appears.

2. Click the **Appearance** tab, and then click **Values** on the **Y-Axis** area of the preview pane on the left.

   The options available for the Y-Axis appear.

3. To display the Y-Axis as a logarithmic scale, select **Logarithmic scale**.

Linking to other documents

chapter 13

Linking to other documents

Cells in Web Intelligence documents can be defined as hyperlinks. Web Intelligence hyperlinks are similar to the hyperlinks found on the World Wide Web that allow you to open a different web page from the page you are currently viewing.

When you click a cell that contains a hyperlink, Web Intelligence opens the target document specified in the link. The target document can be a Web Intelligence document, a Crystal Reports document, a site on the world wide web, or any resource accessible through a hyperlink.

Hyperlinks can be either static or dynamic. A static hyperlink always links to the same document in the same way. A dynamic hyperlink can link differently depending on the data in the document containing the hyperlink.

You can create different types of hyperlink:

- A cell where the cell text is the hyperlink text.
- A cell with an associated hyperlink.
- A link to another document in the CMS.

Cell text defined as a hyperlink

When you define the text in a cell as a hyperlink, the cell text itself becomes the hyperlink text. For example, if you define a free-standing cell containing the text `http://www.businessobjects.com` as a hyperlink, clicking on the cell takes you to the Business Objects web page.

This method is best suited for static hyperlinks, where the text in the cell always remains the same and links to the same resource in the same way.

Note: It is possible to make this type of hyperlink dynamic by using the Web Intelligence formula language to change the cell text based on report data.

To define cell text as a hyperlink

1. Type the hyperlink text in the cell.
2. If you are using Web Intelligence Interactive, right-click the cell and select **Hyperlink** > **Read content as hyperlink** from the menu.

Note: You can also right-click the cell and select **Format** > **Cell** from the menu to display the **"Format Cells"** dialog box, then select **Read content as** and select **Hyperlink** from the list.

3. If you are using the Java Report Panel, click the cell then set the **Display** > **Read cell content as** cell property to **Hyperlink**.

A hyperlink associated with a cell

When you associate a hyperlink with a cell, you define a hyperlink that Web Intelligence uses to link to the source document when the cell is clicked. The cell text itself is not the hyperlink.

This is the recommended method for creating dynamic hyperlinks, for the following reasons:

- It is specially tailored for working with the parameters in dynamic hyperlinks.
- It shields you from the complexity of hyperlink syntax - you define your hyperlink using a graphical interface and Web Intelligence generates and manages the hyperlink behind the scenes.
- It allows you to define hyperlink text that is different from the cell text.

To add a hyperlink to a cell

1. Right-click the cell and select **Hyperlink** > **New** to display the **"Create Hyperlink"** dialog box.
2. Select **Link to web page** on the left of the dialog box. (Web Intelligence Interactive only.)
3. Type or paste the hyperlink text into the box.
4. Click **Parse** to extract the hyperlink parameters into the **Customize URL parameters** area (which is not visible until you click **Parse**).

   Dynamic hyperlinks contain parameters whose values can change. Parameters appear as `name=value` parts at the end of the hyperlink after the question mark. For example, the URL

   ```
   http://salesandproductreport/default.asp?reportname=products
   ```

   contains one parameter, `reportname`, whose value is “products”.

After you click **Parse**, each parameter appears on a separate line with the parameter name on the left and the parameter value on the right. The static part of the hyperlink (the part without the parameters) appears in the **Main** section.

5. To tell Web Intelligence to supply data from formulas or variables as parameter values, click the arrow next to each parameter value and select an option.

Option	Description
Build formula	You build a formula in the Formula Editor to supply the formula output as the parameter value.
Select object	You choose the object from the list in the **"Select Object"** dialog box to supply its value as the parameter value.

Note: When you modify a parameter, Web Intelligence modifies the full hyperlink syntax in the box at the top of the screen.

6. To add or remove a parameter, modify the hyperlink syntax, then click **Parse**.

Note: You cannot add or remove parameters directly in the parameter list in the **Customize URL parameters** area. You must modify the URL syntax directly.

7. Click the arrow next to **Cell content** to change the text displayed in the hyperlink cell and choose one of the options.

Option	Description
Build formula	You build a formula in the Formula Editor to supply the formula output as the cell content.
Select object	You choose the object from the list in the **"Select Object"** dialog box to supply its value as the cell content.

8. Type the tooltip text in the **Tooltip** box or build a dynamic tooltip by using the **Build formula** or **Select variable** options.

Option	Description
Build formula	You build a formula in the Formula Editor to supply the formula output as the tooltip.
Select object	You choose the object from the list in the **"Select Object"** dialog box to supply its value as the tooltip.

The tooltip appears when you hover your mouse pointer over the cell containing the hyperlink.

9. Click the arrow next to **Target window** to define how the target URL appears.

Option	Description
Current window	The target URL replaces the Web Intelligence document containing the hyperlink in the current window.
New window	The target URL opens in a new browser window.

A link to another document in the CMS

You link to another document in the CMS using the **"Create Hyperlink"** dialog box (Web Intelligence Interactive only). When you create the link, Web Intelligence builds a formula using the `OpenDocument` function based on the choices you make in the dialog box.

Note: You can work with the `OpenDocument` function directly by typing the syntax into a cell.

To link to another document in the CMS

1. Right-click the cell where you want to create the link and select **Hyperlink** > **New** from the menu to display the **"Create Hyperlink"** dialog box.
2. Select **Link to a document** on the left of the dialog box.
3. Click **Browse** and select the target document in the **Choose Document** dialog box, or type the document ID in the **Document ID** box.

4. Click **Refresh on open** if you want Web Intelligence to refresh the data of the target document when the hyperlink is selected.
5. Click **Link to document instance**, then select an option from the drop down-list , to link to an instance of the selected document.

Option	Description
Most recent	The hyperlink opens the most recent instance. **Note:** You cannot specify parameter values in the hyperlink when you choose this option. For more information, see *Document instances and values passed to prompts* on page 140.
Most recent - current user	The hyperlink opens the most recent instance owned by the current user. **Note:** You cannot specify parameter values in the hyperlink when you choose this option. For more information, see *Document instances and values passed to prompts* on page 140.
Most recent - matching prompt values	The hyperlink opens the most recent instance whose prompt values correspond to the values passed by the hyperlink. This option is useful when you want to link to a large document that contains prompts. For more information, see *Linking to large documents* on page 141.

6. Click **Report name** and select the name of the report to link to a specific report.
7. Click **Report part**, then click **Select** and right-click the report part (for example a table), to link to a specific part of a report.
8. If you selected **Report part**, select **Display report part only** open the report part only in the target document, or **foo** to focus on the report part but display the whole report in the target document.
9. For each prompt in the **Document prompts** section, select one of the following options from the drop-down list:

Option	Description
Build formula	You use the Formula Editor to build a formula to pass a value to the prompt.
Select object	You select an object whose value is passed to the prompt.
Prompt user at run-time	The user specifies a value for the prompt when they click the hyperlink.
Use document default	You configure the hyperlink to not pass a parameter to the target document, and the target document opens with the default value for the prompt. The default value is either the last value specified for the prompt, or the default specified in the document.

10. Choose **Build Formula** or **Select Variable** from the **Cell content** list to specify the content of the hyperlink cell.

Option	Description
Build Formula	You build a formula in the Formula Editor to supply the formula output as the cell content.
Select Variable	You choose a variable from the list in the **"Select an Object"** dialog box to supply its value as the cell content.

11. Type the tooltip text in the **Tooltip** box or build a dynamic tooltip by using the **Build formula** or **Select object** options.

Option	Description
Build formula	You build a formula in the Formula Editor to supply the formula output as the tooltip.
Select object	You choose the variable from the list in the **"Select an Object"** dialog box to supply its value as the tooltip.

The tooltip appears when you hover your mouse pointer over the cell containing the hyperlink.

12. Select **New window** or **Current window** from the **Target window** list to determine how the target document opens.

Option	Description
New window	The document opens in a new browser window.
Target window	The document opens in the current browser window and replaces the document containing the hyperlink.

Document instances and values passed to prompts

Hyperlinks supply values to prompts in the target document in two ways: by passing values directly to prompts, or by opening a document instance based on passed values.

In the first case, the hyperlink feeds values directly to the prompts in the target document. In the second case, Web Intelligence opens the document instance whose stored prompt values correspond to the values passed by the hyperlink.

It is more efficient to choose a document instance based on passed parameters if the target document is large. For more information, see *Linking to large documents* on page 141.

Certain combinations of instance and parameter settings are incompatible or mutually dependent, as described in the following table:

Instance setting	Impact on parameter setting
Most recent	The hyperlink does not pass parameter values. All parameters are set to **Use target document value** and cannot be modified.
Most recent - current user	The hyperlink does not pass parameter values. All parameters are set to **Use target document value** and cannot be modified.

Instance setting	Impact on parameter setting
Most recent - matching prompt values	You must specify at least one parameter value. Without at least one specified value, the hyperlink returns an error when clicked. The error occurs because the hyperlink is designed to retrieve an instance based on parameter values, but no value is provided for comparison against the instance.

Linking to large documents

When the target document contains a large amount of data, it is more efficient to link to an instance than to open and retrieve the document with a passed parameter value. You can schedule and pre-retreive multiple instances with different parameter values. This allows the document to be scheduled and pre-retrieved in advance with different parameter values.

When you click the hyperlink, Web Intelligence opens the appropriate pre-retrieved instance rather than using the passed value to open the document and retrieve the data.

Example: Linking to a large sales report

In this example you link to a large sales report that retrieves sales by region. The report has a parameter that allows the user to select the region. There are four regions - North, South, East, and West.

Your source document has a [Region] dimension. You do the following:

- Configure the hyperlink to pass the value of [Region] as a parameter
- Create four instances of the sales report, one for each value of [Region]
- Schedule these instances for pre-retrieval
- Configure the hyperlink to open the latest instance whose parameter value matches the value passed by the hyperlink

Assuming that the document has a [Region] dimension, the settings are as follows:

Link to document instance setting	Latest value match
Most recent - matching prompt values	[Region]

Working with hyperlinks

To link to another document from a hyperlink

To link to another document from a hyperlink, the hyperlink must first have been created. For more information on creating hyperlinks, see *Linking to other documents* on page 134

1. Hover your mouse pointer over the cell to display the tooltip if a tooltip is defined.

   Note: If you used the **Hyperlink** dialog box to define the link and the Formula Bar is displayed, the hyperlink syntax generated by Web Intelligence appears in the Formula Bar. Do not modify this syntax directly - use the **Hyperlink** dialog box if you need to update it.

2. Click the hyperlink to open the target document.

   Depending on how the hyperlink is configured the target document opens in a new browser window, or it replaces the current document in the current browser window.

To edit a hyperlink

1. Right-click the cell containing the hyperlink and select **Hyperlink** > **Edit** from the menu to display the **"Hyperlink"** dialog box.
2. Edit the hyperlink using the **"Hyperlink"** dialog box.

To delete a hyperlink

- Right-click the cell containing the hyperlink and select **Hyperlink** > **Delete** from the menu.

Formatting hyperlink colors

You can define the colors that Web Intelligence uses to display hyperlinks that have already been clicked (visited hyperlinks) and hyperlinks that have not been clicked (unvisited hyperlinks).

To set hyperlink colors in Web Intelligence Interactive

1. Right-click a blank area on the report that contains hyperlinks and select **Format Report** on the menu.
2. Click the **General** tab.
3. In the **Hyperlink color** section, click the arrows next to **Visited** and **Unvisited**, then either select a predefined color or click **More colors** to define a custom color.
4. Click **OK**.

   Web Intelligence applies the color settings you selected to the hyperlinks in the report.

URL Reporting Using openDocument

URL reporting using openDocument provides URL access to multiple document types by passing a URL string to a BusinessObjects Enterprise server. openDocument provides commands to control how reports are generated and displayed.

You can use openDocument in BusinessObjects Enterprise to create cross-system links to and from the following document types:

- .wid: Web Intelligence version 6.x documents
- .rep: Desktop Intelligence documents
- .rpt: Crystal reports

- .car: OLAP Intelligence reports

Note: For more information about how to customize your Web Intelligence documents, see the *Web Intelligence Report Engine Developer Guide*.

Structuring an openDocument URL

The next sections explain how to use the openDocument function, and how to construct the URL.

An openDocument URL is generally structured as follows:

```
http://<servername>:<port>/OpenDocument/<platformSpecific>?<parameter1>&<parameter2>&...&<parameterN>
```

The exact syntax of the <platformSpecific> parameter depends on your implementation:

- For Java implementations, use `opendoc/openDocument.jsp` in place of the <platformSpecific> parameter.

The URL is constructed using the parameters listed in *OpenDocument parameter overview* on page 147

Joining parameters

Join parameters with the ampersand (&). Do not place spaces around the ampersand. For example: `sType=wid&sDocName=Sales2003`

The ampersand is always required between parameters.

Spaces and special characters in parameter values

Because some browsers cannot interpret spaces, the parameters of the link cannot contain spaces or other special characters that require URL encoding. To avoid the misinterpretation of special characters, you can define a URLEncoded string in the source database to replace the special character with an escape sequence. This will allow the database to ignore the special character and correctly interpret the parameter value. Note that certain RDBMS have functions that allow you to replace one special character with another.

By creating an escape sequence for the plus sign (+), you can instruct the database to interpret the plus sign as a space. In this case, a document title

Sales Report for 2003 would be specified in the DocName parameter as:
`&sDocName=Sales+Report+for+2003&`

This syntax prevents the database from misinterpreting the spaces in the title.

Trailing spaces in parameter values

Trim trailing spaces at the end of parameter values and prompt names. Do not replace them with a plus sign (+). The viewer may not know whether to interpret the plus sign (+) as part of the prompt name or as a space. For example, if the prompt name displays:

`Select a City:_`

(where _ represents a space), enter the following text in the link:

`lsSSelect+a+City:=Paris`

where the spaces within the prompt name are replaced with the plus sign, and the trailing space is trimmed off.

For details on prompt parameters of the link, refer to *OpenDocument parameter overview* on page 147 .

Capitalization

All of the openDocument parameters are case sensitive.

Link length limit

The encoded URL cannot exceed 2083 total characters.

Parameter values in links to sub-reports

You cannot pass parameter values to a sub-report of a target Crystal report.

Using the IsS parameter with OLAP Intelligence reports

If the target document is an OLAP Intelligence report (.car) you can use the IsS parameter to specify prompts. The parameters are passed in as a URL-encoded string using the unique name of the parameter set up in the OLAP Intelligence report.

Example: Opening a report to a specific page

If `23CAA3C1-8DBB-4CF3-BA%2CB8%2CD7%2CF0%2C68%2CEF%2C9C%2C6F` is the URL-encoded unique name for the page parameter in the OLAP Intelligence report, you would use the following URL to open the OLAP Intelligence report to page 2:

```
http://<servername>:<port>/OpenDocument/<platformSpecif
ic>?sType=car&sIDType=InfoObject&iDocID=440&lsS23CAA3C1-8DBB-
4CF3-BA%2CB8%2CD7%2CF0%2C68%2CEF%2C9C%2C6F=2
```

Example: Opening a cube parameter

If `8401682C-9B1D-4850-8B%2C5E%2CD9%2C1F%2C20%2CF8%2C1%2C62` is the URL-encoded unique name for the cube parameter opening the warehouse cube in the catalogue FoodMart 2000 on MSAS, you would use the following URL to open this cube parameter:

```
http://<servername>:<port>/OpenDocument/<platformSpecif
ic>?sType=car&sIDType=InfoObject&lsS8401682C-9B1D-4850-
8B%2C5E%2CD9%2C1F%2C20%2CF8%2C1%2C62=CATALOG%3DFood
Mart%202000,CUBE%3Dwarehouse&iDocID=616
```

Using the IsM parameter with OLAP Intelligence reports

If the target document is an OLAP Intelligence report (.car) you can use the IsM parameter to specify prompts. The parameters are passed in as a URL-encoded string using the unique name of the parameter set up in the OLAP Intelligence report.

As was the case for the IsS parameter, IsM parameters are also passed in as a URL-encoded string using the unique name of the parameter set up in the OLAP Intelligence report.

Example: Opening a report

```
http://<servername>:<port>/OpenDocument/<platformSpecif
ic>?sType=car&sIDType=InfoObject&lsMADC216EA-D9A5-42B5-
AE%2C21%2C84%2CA9%2CF9%2C6E%2C31%2C7=[%5BCustomers%5D.%5BCoun
try%5D.%26%5BMexico%5D],[%5BCustomers%5D.%5BCoun
try%5D.%26%5BCanada%5D]&iDocID=544
```

This is a memberset parameter opening up a report with Customers > Country > Mexico and Customers > Country > Canada in the view.

OpenDocument parameter overview

This section provides a brief overview of openDocument and includes a list of available commands. Details about the available commands, their specific uses, and relevant examples are also provided.

The exact syntax of the <platformSpecific> parameter depends on your implementation:

- For Java implementations, use `opendoc/openDocument.jsp` in place of the <platformSpecific> parameter.

The first parameter of the link

`http://<servername>:<port>/OpenDocument/<platformSpecific>?`

The first parameter, as displayed in the example above, must precede all other parameters. After this information, the parameters can appear in any order. The parameters of the function are displayed in the following table. The mandatory column indicates whether the parameter is required in the link.

Note: The document containing the openDocument link is called the parent document, and it resides on the parent system. The document to which the link points is called the target document, and it resides on the target system.

Table 13-3: Platform Parameters

Parameter	Description
iDocID on page 150	Document identifier.
sDocName on page 150	Document name.
sIDType on page 151	Crystal object type.
sKind on page 151	The file type of target Desktop Intelligence document.

Parameter	Description
sPath on page 152	The name of the folder and subfolder containing the target document.
sType on page 152	The file type of target document or report.
token on page 152	A valid logon token for the current CMS session.

Table 13-4: Input Parameters

Parameter	Description
lsC on page 153	Specifies a contextual prompt if there is an ambiguity during SQL generation (Business Objects and Web Intelligence documents only).
lsM[NAME] on page 154	Specifies a range of values for a prompt. `[NAME]` is the text of the prompt.
lsR[NAME] on page 157	For Crystal targets only, indicates whether the link should open the full target report or just the report part specified in `sReportPart`.
lsS[NAME] on page 160	Specifies a value for a single prompt. `[NAME]` is the text of the prompt.
sInstance on page 162	Indicates which specific instance of the target report to open.
sPartContext on page 163	In Crystal Reports, a report part is associated to a data context.
sRefresh on page 163	Indicates whether a refresh should be forced when the target document or report is opened.

Parameter	Description
sReportMode on page 164	For Crystal targets only, indicates whether the link should open the full target report or just the report part specified in `sReportPart`.
sReportName on page 164	Indicates which report to open if target document is multi-report.
sReportPart on page 165	Indicates which specific part of the target report to open.

Table 13-5: Output Parameters

Parameter	Description
NAII on page 166	Forces the display of the prompt selection page.
sOutputFormat on page 166	Indicates the format in which the target document is opened.
sViewer on page 167	Indicates the selected report viewer (CR & CA only).
sWindow on page 168	Indicates whether the target report will open in the current browser window or whether a new window will be launched.

OpenDocument Platform parameters

The following tables list the openDocument platform parameters:

Note: Variables are denoted with angle brackets. You must substitute the proper value for these variables. For example, you must use the name of your server in place of `<servername>` where it is contained in the code samples below, and you must use your port number in place of `<port>`.

`iDocID`

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
`iDocID`	Document identifier.	One of `sDocName` or `iDocID` is mandatory.	Document identifier (InfoObjectID).

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecif
ic>?sType=wid&sDocName=SalesReport&iDocID=2010
```

Note: To obtain the document ID, navigate to the document in InfoView, hover your mouse over the document name hyperlink, and look for the ID number in the browser's status bar. You can also obtain the document ID from the Central Management Console.

`sDocName`

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
`sDocName`	Document name without extension If multiple documents have the same name, specify the correct document with `iDocID`.	One of `sDocName` or `iDocID` is mandatory.	Document name.

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecif
ic>?sPath=[Sales+Reports]&sDocName=Sales+in+200
```

---

sIDType

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
sIDType	Central Management Server (CMS) object identifier type.	Yes if the target is a Crystal report or OLAP Intelligence report (sType=rpt or =car) in an Object Package (otherwise, use sPath and sDocName)	• CUID • GUID • RUID • ParentID • InfoObjectID (default)

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecific>?iDocID=2010&sIDType=CUID
```

---

sKind

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
sKind	The file type of target Desktop Intelligence document.	Yes if the target is a Desktop Intelligence document (otherwise, use sType)	• FullClient

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecific>?sKind=FullClient
```

---

sPath

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
`sPath`	The name of the folder and subfolder containing the target document.	Yes if `sDocName` is specified and is not unique.	Folder and/or subfolder: `[folder],[subfolder]`

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecific>?sPath=[Sales+Reports]&sDocName=Sales+in+2005
```

---

sType

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
`sType`	The file type of target document or report.	Yes, but ignored for agnostic documents	• wid • rpt • car

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecific>?sType=wid
```

---

token

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
`token`	A valid logon token for the current CMS session.	No	The logon token for the current CMS session.

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecif
ic>?sType=wid&sDocName=Sales+in+2003&token=<logonToken>
```

OpenDocument Input parameters

The following tables list the openDocument input parameters:

Note: Variables are denoted with angle brackets. You must substitute the proper value for these variables. For example, you must use the name of your server in place of `<servername>` where it is contained in the code samples below, and you must use your port number in place of `<port>`.

lsC

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
`lsC`	Specifies a contextual prompt if there is an ambiguity during SQL generation (Business Objects and Web Intelligence documents only). **Note:** Not supported by OLAP Intelligence	No	A prompt value that resolves the ambiguity in the SQL generation.

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecif
ic>?sType=wid&sDocName=SalesReport&iDocID=2010&lsC=Sales
```

`lsM[NAME]`

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
`lsM[NAME]`	Specifies multiple values for a prompt. `[NAME]` is the text of the prompt.	No	

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
			• Multiple prompt values, separated by a comma. If the target is a Crystal report, each value must be enclosed in square brackets. If the target is a OLAP Intelligence report, use the MDX WITH clause (refer to *Using the lsS parameter with OLAP Intelligence reports* on page 145 and *Using the lsM parameter with OLAP Intelligence reports* on page 146). • no_value (only for optional parameters) **Note:** You can remove an optional parameter from the prompt by setting it to

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
			no_value in the OpenDocument query string. If you leave an optional parameter out of the OpenDocument query string, a default parameter value will be applied.

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecif
ic>?sType=rpt&sDocName=SalesReport&lsMSe
lect+Cities=[Paris],[London]
```

lsR[NAME]

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
lsR[NAME]	Specifies a range of values for a prompt. [NAME] is the text of the prompt. **Note:** Not supported by OLAP Intelligence	No	

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
			• A range of values for the prompt, separated by a double period (..). If the target is a Crystal report, the range must be enclosed in square brackets and/or parentheses (use a square bracket next to a value to include it in the range, and parentheses to exclude it). • no_value (only for optional parameters) **Note:** You can remove an optional parameter from the prompt by setting it to no_value in the OpenDocument query string. If you leave an optional parameter out of the

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
			OpenDocument query string, a default parameter value will be applied.

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecif
ic>?sType=rpt&sDocName=SalesReport&lsRTime+Period:=[2000..2004)
```

`lsS[NAME]`

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
`lsS[NAME]`	Specifies a value for a single prompt. `[NAME]` is the text of the prompt.	No	

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
			• A single prompt value (refer to *Using the lsS parameter with OLAP Intelligence reports* on page 145 and *Using the lsM parameter with OLAP Intelligence reports* on page 146). • no_value (only for optional parameters) **Note:** You can remove an optional parameter from the prompt by setting it to no_value in the OpenDocument query string. If you leave an optional parameter out of the OpenDocument query string, a default parameter value will be applied.

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecif
ic>?sType=wid&sDocName=SalesReport&iDocID=2010&lsSSe
lect+a+City=Paris
```

`sInstance`

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
`sInstance`	Indicates which specific instance of the target report to open.	No (use with `sDocName` and `lsS[NAME]`)	• `User` (Link to latest instance owned by current user) • `Last` (Link to latest instance for report) • `Param` (Link to latest instance of report with matching parameter values)

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecif
ic>?sPath=[Sales+Reports]&sDocName=Sales+in+2003&sReport
Part=Part1&sInstance=User
```

---

sPartContext

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
sPartContext	In Crystal Reports, a report part is associated to a data context.	Yes if a value is specified for sReportPart	Data context of the report part.

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecific>?sPath=[Sales+Reports]&sDocName=Sales+in+2005&sReportPart=Part1&sPartContext=0-4-0
```

---

sRefresh

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
sRefresh	Indicates whether a refresh should be forced when the target document or report is opened.	No	• Y (forces the document's refresh) • N (note that the refresh on open feature overrides this value)

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecific>?sType=wid&sDocName=SalesReport&iDocID=2010&sRefresh=Y
```

---

sReportMode

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
sReportMode	For Crystal targets only, indicates whether the link should open the full target report or just the report part specified in sReportPart.	No (default is Full) Only applies if a value is specified for sReportPart	• Full • Part

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecif
ic>?sPath=[Sales+Reports]&sDocName=Sales+in+2003&sReport
Part=Part1&sReportMode=Part
```

sReportName

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
sReportName	Indicates which report to open if target document is multi-report.	No (default is the first report)	Report name for Web Intelligence documents, sub-report for Crystal Reports, pages for OLAP Intelligence reports.

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecif
ic>?sType=wid&sDocName=Sales+in+2003&sReportName=First+Re
port+Tab
```

`sReportPart`

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
`sReportPart`	Indicates which specific part of the target report to open.	No	Name of the report part.

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecif
ic>?sPath=[Sales+Reports]&sDocName=Sales+in+2003&sReport
Part=Part1
```

OpenDocument Output parameters

The following tables list the openDocument output parameters:

Note: Variables are denoted with angle brackets. You must substitute the proper value for these variables. For example, you must use the name of your server in place of `<servername>` where it is contained in the code samples below, and you must use your port number in place of `<port>`.

NAII

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
NAII	Forces the display of the prompt selection page. **Note:** Not supported by OLAP Intelligence	No	• Y (all prompts whose values are passed with lsS, lsM or lsR are pre-selected) • N (displays only the prompts whose values passed with lsS, lsM or lsR)

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecif
ic>?sType=wid&sDocName=SalesReport&iDocID=2010&NAII=Y
```

---

sOutputFormat

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
sOutputFormat	Indicates the format in which the target document is opened.	No (default is HTML if the parameter is not specified in the link)	• H (HTML) • P (PDF) • E (Excel) • W (Word)

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecif
ic>?sPath=[Sales+Reports]&sDocName=Sales+in+2003&sOutputFor
mat=E
```

`sViewer`

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
`sViewer`	Indicates the viewer that is used to view the document.	No	• `html` • `actx` (Crystal reports only) • `java` (Crystal reports only)

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecif
ic>?sPath=[Sales+Reports]&sDocName=Sales+in+2003&sViewer=html
```

Example:

Note: In order to use parameters in the URL with the ActiveX viewer, `:connect` must be appended to the URL, followed by the parameters.

```
http://<servername>:<port>/OpenDocument/<platformSpecif
ic>?sPath=[Sales+Reports]&sDocName=Sales+in+2003&sViewer=ac
tx:connect&IsMCountry=[Thailand],[Norway]
```

`sWindow`

Parameter syntax	Description of parameter	Mandatory?	Values accepted for parameter
`sWindow`	Indicates whether the target report will open in the current browser window or whether a new window will be launched.	No	• `Same` (current browser window) • `New` (new browser window is launched)

Example:

```
http://<servername>:<port>/OpenDocument/<platformSpecif
ic>?sType=wid&sDocName=SalesReport&iDocID=2010&sWindow=New
```

Contextual report linking

The openDocument feature allows you to create contextual links between Crystal reports, OLAP Intelligence reports and Web Intelligence documents. To do this, you construct a URL using the openDocument syntax and then insert the URL into a Crystal report, OLAP Intelligence report or Web Intelligence document.

Contextual report linking allows report designers to specify associations for documents residing in either a Crystal Reports environment (unmanaged) or a BusinessObjects Enterprise environment (managed). Once these associations are created, users follow the resulting navigational paths embedded in the linked documents.

This feature enables you to invoke Business Objects and Web Intelligence documents from Crystal Reports and vice versa. This feature relies on functionality that allows the user to do the following:

- Link Web Intelligence or Business Objects documents within the document domain.

- Link report objects in Crystal Reports.

Click the appropriate link to jump to that section:

- *To insert a link into a Crystal report* on page 169
- *To create a link to another report or document from an OLAP Intelligence report* on page 170
- *Creating links in Web Intelligence documents* on page 170

To insert a link into a Crystal report

You can use openDocument to create hyperlinks in Crystal Reports. To create a link to another report or document, use the Hyperlink Tab of the field Format Editor.

1. Open the source report in Crystal Reports.
2. Right-click the field in which you want to insert the openDocument link and select **Format** from the shortcut menu.
3. In the Format Editor, select the **Hyperlink** tab.
4. Select **A website on the Internet**.
5. In the “Hyperlink information” area, leave the **Website Address** field empty and click the **Format Formula Editor** button.
6. Enter the openDocument link in the following format:

   ```
   "http://[openDocument parameters]"+{Article_lookup.Family_name}
   ```

   Where [openDocument parameters] are described in *OpenDocument parameter overview* on page 147, and the {Article_lookup.Family_name} enables the report to pass context-dependent data.

   Note: Test your link in a browser window before inserting it into a report or document.

7. Click **Save and Close** to leave the Formula Workshop.
8. Click **OK** in the Formula Editor to save the link.

To create a link to another report or document from an OLAP Intelligence report

You can use openDocument to create hyperlinks in OLAP Intelligence reports.

1. Open the source report in the OLAP Intelligence designer.
2. On the **Tools** menu, select **Action Manager** .
3. Click **New** to create a new action.
4. Enter an action name.
5. Select the area to which the action (the link) will apply.
6. Enter the openDocument link using the parameters and syntax described in this document.

   Tip: Test your link in a browser window before inserting it into a report or document.

7. Click **OK** to save the link.
8. Close the Action Manager dialog box.
9. Create an Analysis Button on the source report.
10. Right-click the Analysis Button.
11. In the drop-down menu, select **Properties** and then **Edit** .
12. Select **Launch an action** .
13. Select the action that corresponds to the openDocument link created in steps 3 through 6.
14. Click **OK** .

Creating links in Web Intelligence documents

You can define objects in a universe that allow Web Intelligence and BusinessObjects users to create reports whose returned values include links to other reports and documents.

When these reports are exported to the repository, users can click returned values displayed as hyperlinks to open another related document stored in the document domain of the repository.You create these links using the openDocument function in the definition of an object in Designer.

More information

For full information on creating links in Web Intelligence reports, see the *Building Reports Using the WebIntelligence Java Report Panel* guide.

You enable report linking in a universe by creating an object (the link object) whose returned values are the same as the values used as input to a prompt in an existing report (the target report).

The openDocument function allows the values for the link object to be returned as hyperlinks. When the user clicks the hyperlink, its value is used as the prompt input for the target report.

You can create documents using the link object as you would with any other object. Users can then click the hyperlinks to access more detailed documents related to the link object.

To create a link object, use the openDocument function in the object's Select statement. The Select statement for a link object follows this order:

```
'<a href="http://<servername>:<port>/OpenDocument/<platformSpe
cific>?sDocName=<document name>&sType=<document type>&iDo
cID=<document id>&lsS<prompt message>='+object SELECT+'">'+ob
ject SELECT+'</a>'
```

The concatenation operator (+) applies for Microsoft Access databases. Use the operator appropriate to your target RDBMS.

For more details on the Select statement, creating link objects, and using link objects in InfoView, refer to the *Designer's Guide*.

Working with documents

chapter 14

Creating and deleting documents

To create a Web Intelligence document from InfoView

1. Click **Document List** on the InfoView toolbar.
2. Click **New** > **Web Intelligence Document**
3. Select the universe on which you want to create the document and click **OK**.

   Note: If your InfoView Web Intelligence preferences specify a default universe, this step is omitted and the Web Intelligence query editor opens and displays the objects in the default universe.

4. The Web Intelligence query editor specified in the InfoView Web Intelligence preferences opens and displays the objects in the universe you selected.
5. Build and run the query using the query editor.

To delete a Web Intelligence document from InfoView

1. From the InfoView home page, navigate to the folder that contains the document you want to delete.
2. Select the check box next to the name of the document you want to delete.
3. Click **Delete**.

Saving documents

To save a new Web Intelligence document in InfoView

1. With the document open in the Java Report Panel or Web Intelligence HTML, click **Save** on the main toolbar.

The **Save Document** dialog box opens.

2. Click **Folders** or **Categories** to display the repository by folders or by categories.
3. In the **Name** box, type the name of the document.
4. Click **Advanced** to display additional document options.
5. In the **Description** box, type a meaningful description of the document (optional).
6. In the **Keywords** box, type keywords that you or other users can use to search for the document in the future (optional).
7. Select **Refresh on open** to refresh the document each time it is opened.
8. Select **Permanent Regional Formatting** to preserve the document regional formatting with the document.
9. Click **OK**.

   The document is saved in InfoView.

To save a Web Intelligence document as an Excel spreadsheet

1. With the document open, click **Document** > **Save to my computer as** > **Excel**(In Web Intelligence HTML) or click the arrow next to **Save**, then select **Save to my computer as**, then click **Excel** (in the Java Report Panel).

   The **File Download** dialog box appears.
2. Type a file name or accept the default name displayed.
3. Select **Save this file to disk**, then click **OK**.
4. Select a file location on your computer, then click **Save**.

   Web Intelligence saves a copy of your document in Microsoft Excel format to the location you specified on your computer. Each report within the Web Intelligence document converts to a separate Excel worksheet within the Excel file.

   Note: Some Web Intelligence chart formats do not exist in Excel. These charts are automatically converted to the closest corresponding chart format available in Excel.

To save a Web Intelligence document as a PDF file

1. With the document open, click **Document** > **Save to my computer as** > **PDF** (in Web Intelligence Interactive) or click the arrow next to **Save**, then select **Save to my computer as**, then select **PDF** (in the Java Report Panel).

   The **File Download** dialog box appears.
2. Type a file name or accept the default name displayed.
3. Select **Save this file to disk**, then click **OK**.
4. Select a file location on your computer, then click **Save**.

   Web Intelligence saves a copy of your document in Adobe Acrobat PDF format to the location you specified on your computer.

To save a Web Intelligence document as a CSV file in Web Intelligence HTML

1. With the document open, click **Document** on the toolbar above the displayed reports.
2. Select **Save to my computer as** > **CSV** to save the document with the default options or **Save to my computer as** > **CSV (with options)** to choose the options.
3. If you chose **CSV (with options)** in the previous step, choose the text qualifier, column delimiter and character set in the **"Save as CSV - Options"** dialog box.
4. Select **Set as default values** in the **"Save as CSV - Options"** dialog box if you want the options you chose in the previous step to be the default options when you wave to CSV.
5. Click **OK** to close the **"Save as CSV - Options"** dialog box.

   The **File Download** dialog box appears.
6. Select **Save this file to disk**, then click **OK**.
7. Type a file name or accept the default name displayed.
8. Select a file location on your computer, then click **Save**.

   Web Intelligence saves a copy of your document in CSV format to the location you specified on your computer.

Printing Web Intelligence documents

You print Web Intelligence documents report-by-report. You can print one or multiple reports from a single document. Web Intelligence generates a PDF file from the selected report for printing.

To print Web Intelligence reports, you need Adobe Acrobat Reader installed on your local computer. If you don't have Acrobat Reader installed, you can download Acrobat Reader free at: www.adobe.com.

Web Intelligence prints reports from left to right, and then top to bottom. If a report is wider than the width of the paper size defined in the Report Page Layout, Web Intelligence inserts page breaks for the printout.

The paper size and page orientation for printing can be different from the paper size and page orientation set for the reports when you view them in the Java Report Panel. This enables users using different printers to specify the appropriate layout when they print.

To print a Web Intelligence report

1. With the document open, click the arrow next to the **View** button on the main toolbar above the report.
2. Click **PDF Mode**.
3. Print the document by using the Acrobat Reader **Print** command.

Web Intelligence document properties

The following table lists the Web Intelligence document properties that you can view and/or set:

Property	Description
Title	The name of the document in InfoView.
Author	The creator of the document.
Description	Optional information that describes the document.

Property	Description
Keywords	Optional keywords that can be used to search for the document in InfoView.
Last refresh date	Informs you when the results were last refreshed with the latest data from the database.
Duration of the previous refresh	Informs you how long it took for Web Intelligence to retrieve the data from the database the last time the results were refreshed.
Locale	Tells you the formatting locale of the document.
Version	Tells you the version of Web Intelligence software used to create the document.
Previous version	If the document was upgraded from a previous version of Web Intelligence software, the Web Intelligence version used to create the original document appears here
Enhanced viewing mode	When this option is checked, the appearance of reports is optimized for onscreen viewing.
Refresh on Open	When this option is checked, Web Intelligence automatically refreshes the results in reports with the latest data from the database each time the document is opened.
Use query drill	When this option is checked, Web Intelligence drills in query drill mode.

Property	Description
Auto-merge dimensions	When this option is checked, Web Intelligence automatically merges dimensions with the same name and from the same universe. You see the merged dimension in the list of available objects with the dimensions merged within it below. Merged dimensions are the Web Intelligence mechanism for synchronizing data from different data providers.
Permanent regional formatting	When this option is checked, the document always behaves according to the format locale with which it was saved.

Related Topics

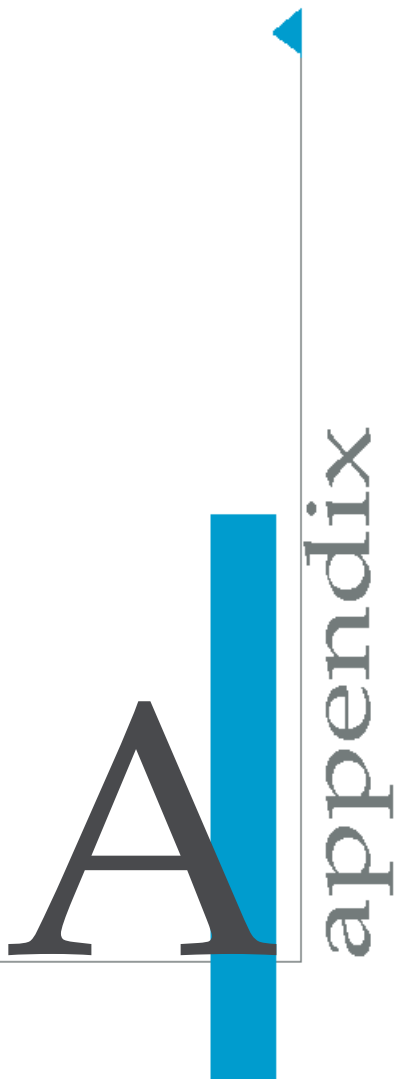
- *Merged dimensions defined* on page 44
- *Query drill defined* on page 83

To view and set Web Intelligence document properties

1. With a Web Intelligence document open, click the arrow next to **Document** on the main toolbar above the report.
2. Select **Properties**.

   The **Document Properties** dialog box appears.
3. Set the properties as appropriate.

Get More Help



Online documentation library

Business Objects offers a full documentation set covering all products and their deployment. The online documentation library has the most up-to-date version of the Business Objects product documentation. You can browse the library contents, do full-text searches, read guides on line, and download PDF versions. The library is updated regularly with new content as it becomes available.

http://support.businessobjects.com/documentation/product_guides/

Additional developer resources

http://devlibrary.businessobjects.com

Online customer support

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http://www.businessobjects.com/support/

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